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PRACTICAL TREATMENT OF THE COMMON NEUROSES*†

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IT IS generally recognized that the treatment of the neuroses is often difficult and frequently unsatisfactory to the general practitioner, internist and others not specifically interested in neuropsychiatry. The reasons for these difficulties arise from a number of factors, some of which it is my purpose to discuss in this presentation. These factors include (1) a minimum necessary knowledge of the psychopathology of the neuroses, (2) the attitude of the physician to the problems of diagnosis and treatment, and (3) a thorough knowledge of a few principles of therapy.

Some Basic Principles of the Psychopathology of the Neuroses

The neuroses (psychoneuroses) may be defined as conditions characterized by a variety of subjective complaints without any primary structural or chemical causes to account for their existence and generally traceable to some disturbance in the psychologic processes of the individual.

There is no gross or microscopic morbid anatomy or chemistry to guide the physician in the diagnosis and therapy of the neuroses, yet neuroses, like other natural phenomena, must have a beginning, an evolution, and some rhyme and reason for the various manifestations. This is to be found in certain psychopathologic formulations, not all of which stand the tests of scientific criteria. Thus the concept of "personality" itself is, for the most part, a philosophic abstraction, but one without which the treatment of the neuroses is hardly possible. The personality is the sum total of all reactions experienced by an individual.

From the standpoint of the neuroses, the most important aspect of the personality is the emotional reaction. These emotional reactions may have their origin in situations of which the patient is perfectly aware (in the conscious) or in occurrences or phantasies of the past of which he is totally unaware (in the unconscious). The existence of the unconscious has not been proved, but at present it is a necessary hypothesis in the management of the neuroses. The unconscious activities of the personality are comparable to the activities of most of the thoracic and abdominal viscera of which we are not normally aware but which nevertheless exert a determining influence on our very life. It is only when the viscera become disturbed that we become aware of them by reason of symbols which we call symptoms. Symptoms in organic medicine are often clever disguises, such as edema in Bright's disease, glycosuria in pancreatic disease, etc. It has taken thousands of years to correlate the bizarre symbols with their true causes. This tendency for nature to disguise and symbolize is even more marked in psychopathology and makes the subject at times very complex, but, just as in organic medicine, there is always a chain of events to account for the occurrence of the various phenomena.

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Most of us can as easily understand the occurrence of tachycardia, vomiting, diarrhea or fainting as an immediate result of some great emotional shock just as we understand the vomiting in obstructions of the gastrointestinal tract or the tachycardia in the failing heart. Some may doubt that insomnia, abnormal fatigability and irritability, phobias and many visceral disturbances are due entirely to emotional disturbances, the inception of which originated years prior to the development of the symptoms, although none of us at present questions that tabes dorsalis and other marked changes in the various organs had their origin in a humble small cutaneous lesion called a chancre. It is a fact, nevertheless, that many neurotic symptoms are prolongations of early emotional states which remain dormant in the unconscious part of our personalities until some exciting cause activates them.

The concept of neuroses as a distinct clinical entity is necessary for diagnosis and especially for successful treatment. In actual practice, however, it is frequently difficult to distinguish between what is "neurotic" and what is "organic." This is due to the fact that every disease must be considered as having both a somatic and a psychic component. The components are indivisible and should be evaluated in their relation to etiology and to the total situation (Weisenburg, Yaskin and Pleasants[1]). Whether the disease arises as a result of structural changes in the soma, of abnormal chemisms, or of emotional conflicts or abnormal psychic tensions, a change of affect of the individual (the subjective phase) and corresponding changes in the neuromuscular, autonomovisceral, and secretory functions (objective evidences or emotional expression) take place.

The principal relay station for emotional components of the various diseases would appear to be the diencephalon (Yaskin,[2] Fetterman[3]). It is responsible for the correlation of psychic and somatic disorders, has a regulating influence upon both of the major divisions of the vegetative system and indirectly upon most of the endocrine glands, metabolism, and heat regulation, and receives impulses from, and sends them to, the old and new brain and the neuraxis. In primary somatic disease this center receives abnormal impulses and registers them in the viscera, especially in the abdomen, the "sounding boards of emotions" (James[4]) in the form of emotions. In the disorders of the general chemism the center may be affected directly or centripetally via the vegetative nervous system. In states of emotional conflict and abnormal tension this center may be influenced from the cerebral cortex and then set up impulses responsible for secondary changes in function and even in structure of the various viscera (Alvarez,[5] Moschcowitz,[6] Weiss[7]). Viewed from this concept, the diagnosis of neurosis or psychoneurosis requires not only the absence of any primary somatic or chemical disease, but also at all times the findings of a satisfactory psychogenic cause.

The above two criteria for the diagnosis of minor psychoses make such a diagnosis very difficult. The coëxistence of organic thoracic disease and neurotic symptoms is well known, and their etiologic relationship is often difficult to evaluate. Even with very painstaking investigation, organic disease may not be correctly diagnosed, and the cases may be managed as neuroses. The causes for such errors have been reviewed elsewhere (Weisenburg, Yaskin and Pleasants,[1] Yaskin[8]).

Even more difficult, however, is the finding of adequate psychogenic causes without which treatment is often futile. The chief reason for the difficulty is that our present psychopathology is definitely unsatisfactory and, when subjected to scientific criteria of proof, is not completely convincing even to the most sympathetic observer with the objective method of thinking. However, there is general agreement that for therapeutic purposes the diagnosis of psychoneuroses and neuroses implies the absence of any primary structural or chemical disease; the existence, in the majority of cases, of a certain constitutional make-up (the predisposing cause), the occurrence of precipitating or exciting causes, and the formation of symptoms which may be in the psychic or in the physiologic sphere, or both.

The constitutional factors may be inherited or acquired. In the "neurotic personality" the neurosis is "built into the character" and is characterized by manifestations intermediate between normal character traits and neurotic symptoms (Jones[9]). Symptom formation results from the action of some exciting cause which may be an injury, infection, a chemical disturbance, or some emotional stress. The symptoms may continue long after the exciting cause ceases to operate, and thus represent release phenomena of the neurotic traits of the previously well integrated personality. These symptoms include either frank anxiety states or symptoms tending to avoid anxiety, such as conversion syndromes, compulsive-obsessive states, neurasthenic reactions, etc. (Yaskin[2]). These symptoms may vary in severity from a slight headache, increased fatigability and irritability, to devastating visceral disturbances, intractable insomnia with marked agitation, and alarming loss of weight. The clinical manifestations frequently overshadow completely the primary constitutional factors or the immediate precipitating mechanisms.

Anxiety is the central symptom of nearly all the neuroses and psychoneuroses and is of fundamental importance in the management of all neuroses. Anxiety may be defined as a form of affectivity recognized introspectively as an unpleasant affect, accompanied by a fear without any, or without an adequate cause; and manifested objectively by abnormal changes in the neuromuscular, autonomovisceral, and secretory functions (emotional expressions). All neurotic symptoms are derived from anxiety arising in the conscious or unconscious parts of the personality. These symptoms include frank anxiety or conversions and substitutions for anxiety reflected in disturbances in the physiologic or emotional spheres.

It is necessary to emphasize two other factors:

1. A given group of symptoms (such as cardiac or gastrointestinal) is only a conspicuous part of the total neurosis. The symptoms can rarely be successfully treated without evaluating the total situation.

Just what determines the occurrence of disturbed function in some organs and not in others is not definitely known. The choice of the organ involved may be traceable to one or more of the following factors: (a) an inherited structural or functional inferiority of some organ (Adler[10]), (b) acquired constitutional traits through early inhibitions and frustrations, especially in the psychosexual spheres, and (c) incidental and often precipitating causes which often act through auto- and heterosuggestion and other psychic mechanisms in a manner entirely unknown to the patient, but having a definite relation to some experience or phantasy in earlier life.

2. The various symptoms and their special etiology, psychopathology, prognosis, and treatment differ somewhat in the several types of neuroses. This topic is discussed under the heading of treatment.

THE ATTITUDE OF THE PHYSICIAN TO THE PROBLEM OF DIAGNOSIS AND TREATMENT

The management of the neuroses imposes upon the modern scientifically-minded physician many hardships and even punishments. He was nurtured, and assumes himself living, in an atmosphere of precision with controls in diagnosis and treatment. This scientific atmosphere does not yet exist in the psychopathology or treatment of the neuroses. In the management of the neuroses he has to use an entirely different technic. If he is, and he should be, of a critical type of mind, he finds great difficulty in dissociating himself from his "organic" leanings despite all his efforts to the contrary. But even if he is willing to accept the teachings of psychopathology and has a working knowledge of this subject, he is confronted with the most difficult aspect of the problem, namely, the time element necessary for examination and treatment. The management of most of even common neuroses requires much time, which those practicing medicine cannot spare. Lastly, it is necessary to emphasize that some physicians are constitutionally unfit to manage neuroses, just as some physicians cannot be good surgeons, obstetricians, or pediatricians.

SOME PRINCIPLES IN TREATMENT

There are many schools of thought on the treatment of the neuroses. There are still those who attribute the neuroses to organic conditions and accordingly stress the importance of the removal of foci of infection, prolonged physical rest, tonic medication, physical therapy, and change of environment. Some hold that persuasion and rationalization will cure most neuroses. Others depend on suggestion (including hypnosis), and still others on the so-called individual psychology, analytical psychology, group analysis and on Freudian analysis and its several modifications. Some of the systems of treatment are totally unsuitable except for those who devote their time exclusively to psychotherapy. Most neuropsychiatrists use one system with individual modifications.

The suggestions for treatment in this presentation may be utilized by those not specializing in neuropsychiatry. This will take care of some of the common neuroses, such as anxiety neurosis, conversion hysteria, and some cases of anxiety hysteria. Many cases of anxiety hysteria and nearly all obsessive-compulsive reactions should be treated by qualified neuropsychiatrists.

As in other branches of medicine it is better to know and employ a few procedures well rather than to resort to many procedures in a haphazard fashion. It is probably no exaggeration to state that in no branch of medicine is the treatment less understood or systematized. Haphazard treatment not only decreases the benefit to the patient but does not improve the physician's acumen. On the other hand, if the physician becomes skilled in the employment of a few procedures he will eventually acquire new ones and will finally make a good therapeutist.

For purposes of treatment we may compare a neurosis with some acute infectious process such as pneumonia. In the latter disease the fundamental process is a systemic infection, predominantly in the lungs, accompanied by annoying symptoms such as pain, cough, and an unpleasant systemic reaction. In the neuroses there are similar symptoms, with the primary process, however, in the realm of emotions and with only mild secondary physical disturbances. The basic principle in the treatment of pneumonia is to overcome the underlying infection, and at the same time the annoying symptoms are allayed by various means. In the treatment of the neuroses exactly the same principles are followed. To the psychotherapist the emotional disturbances, conscious or otherwise, have just as much significance as does the infection to the physician treating the pneumonia. The therapeutist must have this approach if he is to be successful with his patients. If the therapeutist has such an attitude he is not likely to state to the patient at the conclusion of the physical and laboratory investigations, "There is nothing the matter with you, I can find nothing wrong with you. Don't be crazy; forget about it and snap out of it." He should rather say to himself, "It is now my business to determine the emotional factors which produced the soil and the evolution of the tension and disguises reflected by the patient's complaints."

The treatment varies with several types of neuroses. The discussion will be considered under the headings, psychotherapy applicable to most common neuroses, treatment of symptoms, treatment of anxiety neurosis, and treatment of conversion hysteria.

PSYCHOTHERAPY

This is useful in the treatment of all neuroses and neurotic manifestations complicating physical disease, but it is especially useful in anxiety hysteria (sometimes called neurasthenia, anxiety state, or nervous exhaustion).

Psychotherapy is a procedure which aims to correct the underlying psychopathologic difficulties as well as the various symptoms of which the patient complains. It is a psychologic device used to change the attitude of the patient toward himself, toward his physical and mental processes and toward his environmental factors. It is an attempt to reëvaluate his various life problems in relation to his various symptoms in the light of intellectual but especially emotional experiences. For descriptive purposes psychotherapy is divisible into several artificial stages.

1. *Rapport.*—This is a relationship between physician and patient whereby the latter gains confidence in and respect for the therapist, and at least a desire to coöperate despite preconceived notions of the origin of his symptoms. Rapport is indispensable for successful treatment and is probably the most important step in the treatment. To attain the attitude of a satisfactory rapport the patient must feel that the physician not only sympathizes with him but also that he has a clear formulation of his case and has the ability to help him. To live up to the patient's expectation the physician must not be too hasty in arriving at formulations, but once he makes up his mind he must remain firm in his statements, betray no doubts or indecisions, and above all be frank and truthful.

The creation of the rapport begins with the taking of the history. The history should be complete and should be recorded at once. The patient should be given ample time to tell his story even if repeated visits are necessary. The physical examination should be complete. Necessary laboratory procedures should be made and at times some special examinations, such as X-ray films of the skull, electrocardiograms, or gastrointestinal X-ray examination, should be made even though the clinician's judgment does not warrant such procedures. Once the physical investigations are completed and found negative, reëxaminations are most inadvisable since they unsettle the patient.

At this point the physician is in a position to inform the patient that his symptoms are not due to physical causes and to emphasize that his complaints are undoubtedly due to other causes which are in need of treatment. Without being specific the average patient will understand the statement that, just as physical disorders cause emotional disturbances, so emotional disturbances may cause physical derangements, and that irrespective of origin the patient's disability requires medical treatment. One may add that the human mind is at least as complicated and intricate as the human body and that disturbances of either are problems for treatment. Some common sense examples of the effects of fear and the other major emotions may be given at this point. It may also be necessary to state that absence of physical causes does not mean that the patient is insane or that he "imagines" his symptoms. Above all, at this point the patient must be assured that he will get well although he may fail at first or that he may have to actively help the physician in the treatment.

The patient is next given the general statement that his individual symptoms are undoubtedly a source of unhappiness and will receive palliative treatment just as cough and pain in pneumonia would be treated, but that the success of the treatment will depend upon tracing and correcting unusual attitudes and reactions of the personality of which the presenting symptoms and nervous tension are conspicuous manifestations.

2. *Ventilation or Aeration.*—This consists in bringing into conscious attention in specific detail unwholesome attitudes and reactions which are usually associated with irritating memories. Some material is usually elicited in a detailed initial history. Much information will be given by the patient when he is permitted to talk freely in direct interviews. Often, however, it is necessary to use the free association method. It should be stressed that ventilation is not merely a diagnostic procedure. Its goal is to give the patient the opportunity to discharge and bring out in the open all possible life experiences and phantasies which might have been causing him difficulties either consciously or unconsciously.

Ventilation should be supplemented by procuring from outside sources all possible information regarding the experiences and reactions of the patient, and the actual environmental factors in which he lives.

3. *Desensitization.*—This consists in removing the unpleasant emotional tone attached to the memories by intellectual discussion. The patient is encouraged to face openly the unpleasant experiences and memories of the past. To accomplish this the material must be brought into consciousness repeatedly. This is done either by direct interviews or by the free association method. In the course of time there is usually a better objective understanding by the patient, and, what is more important, the emotion loses its unpleasant "sting."

The physician should guide the patient in this phase of the treatment. An element of suggestion is neither unavoidable nor undesirable, provided the therapeutist does not abuse it. It is necessary that the desensitization should be gradual to avoid severe "shock" reaction, avoiding undue wounding of sensitivity and pride, and slowly building up tolerance to unpleasant emotional realizations.

It is best to leave most patients with some formulation at the end of each treatment period.

4. *Retraining, Reëducation, and Stabilization.*—This consists in guiding the patient to react more or less automatically in a symptomless, efficient, and wholesome manner to various stresses in life. To be more or less automatic the responses have to be free from unpleasant emotional tone which is accomplished by desensitization, and must be learned, at least in the adult, by persistent conscious effort. As a necessary part of lasting successful retraining and reëducation the patient should be guided to formulate an economic, social, and recreational plan which will vary markedly with the individual patient.

5. *Psychotherapy of the Family.*—It is often necessary to desensitize the various members of the family to the patient's illness and reëducate them into new modes of response toward each other and toward the patient.

6. *Compromise Formation.*—The neurotic situation is often complicated by various stresses, such as marital, economic, or social, which cannot be eliminated. The patient should be made to face the facts and work out some compromise for himself.

The following two case reports of anxiety hysteria briefly illustrate practical therapy. Anxiety hysteria is characterized by a variety of somatic complaints not due to primary organic or biochemical disturbances, accompanied by diffuse anxiety or by phobic phenomena, and traceable to psychogenic, often unconscious, causes. It is the commonest form of neurosis.

Case 1.—M. S., aged 48, divorced, complained of severe pain in the right shoulder and backache. Her father deserted the family when the patient was 3 years old, and she was raised by her mother and paternal grandmother. She married at the age of 20, was separated and divorced a few years later, worked and raised her son, sending him through high school. The past medical history was negative. Menopause occurred at 42 years of age.

The pain in the right shoulder followed a mild trauma. It was diagnosed and treated as subacromial bursitis, but despite 9 months of therapy there was limitation of the movements at the joint and pain, especially at night. The backache had developed recently.

Physical examination disclosed clinical evidences of right subacromial bursitis, unaccompanied by X-ray evidence of calcification. The rest of the physical and neurologic examination was negative; the X-ray films of the vertebrae showed a low-grade arthritis.

Observation in the hospital disclosed the presence of 3 infected teeth, which were removed. This procedure was followed by rapid improvement in the right shoulder. Now, however, her backache became worse; she became itense, had frequent crying spells, ate and slept poorly and lost considerable weight.

It appeared that this woman had spent her entire life raising her only son, who married three years before. The three lived together, the young wife working in the town, while the mother and son traveled 12 miles to work, morning and evening. There had been disagreements between the two women right from the start. The patient believes that they both tried to be considerate of each other, but quarrels occurred, and there was always a feeling of tension in the house. The son sided alternately with his mother and his wife.

Against psychiatric advice this patient was put in a body cast which only aggravated her condition. The patient was permitted to discuss possible causes of her insomnia and nervous tension. An attempt was made to indicate that, whereas her shoulder pain was entirely physical in origin, the backache was merely a part of her emotional disturbance, which may well reflect her various life problems. The patient did not agree with this entirely, but was not altogether resistive. Significantly, on several occasions, she emphasized the fact that she was trying to make an adjustment with her daughter-in-law but that it did not seem to work out. Nevertheless, there was gradual improvement to the point where sedative and somnifacients were discontinued. Moreover, I succeeded in prevailing upon the orthopedic physician to discontinue all forms of physical therapy and to encourage the patient to walk around despite her painful back. At the end of eight weeks of hospitalization I insisted that she go to a relative 100 miles away from her home and remain there for at least a month, encouraging her to be active physically and otherwise. By the time she left the hospital she agreed that she had been definitely unhappy since the entrance of the daughter-in-law into her home, and stated that if she ever recovered she would live separately from her married son.

She returned six weeks after the discharge from the hospital, stating that she had no complaints except slight limitation of movement of the right shoulder and that she slept well and felt better than she had in several years. She returned to work the following week and has worked since. However, about six weeks after her return to work she came in complaining of a backache of five days' duration. At first she could not account for it, but after a brief discussion it became evident that the backache followed immediately after an episode in which the daughter-in-law exhibited lack of tact.

Comment.—This case illustrates the coëxistence of physical disease and neurosis. The latter is accompanied by both somatic complaints and anxiety. It is traceable to an abnormal attachment of a mother to her only son, whom she is not willing to give up. The nervous tension and symbolization in this case are really not deeply in the unconscious and are not difficult to trace. Verbalization in the form of discussions was conducive to satisfactory therapeutic results.

Case 2.—J. K., aged 34 years, a hosiery merchant, married 13 years, with a 7-year-old daughter, complained of marked difficulty with vision, fear that he was going blind, insomnia, and general nervous tension. His parents have been separated for ten years. He is one of twins, and as a child was considered very delicate, but there is no record of any major disease, early or later in life. He does not drink or smoke. At the age of 16, while at boarding school, he experienced difficulty in concentration and application, and vague fears which he attributed to masturbatory experiences. He was taken out of school and put on a farm which his father bought for him. There he lived with his mother until he was 22 years old, with only occasional visits from his father. During these years he was under complete domination by his mother, both of them working hard, and taking little or no interest in the outside world. At the end of this period his father, who was a fairly rich man, lost his fortune. The patient went into the hosiery business, again assisted by his mother, and made a success of it. When calling on his future wife he was usually accompanied by his mother. The engagement was broken off because of the attitude of the mother, but marriage was finally consummated. He continued prospering in his business, working for long hours, always guided by his mother, and having few interests except his business and farm. On occasional fishing trips he preferred the company of his mother to that of his wife.

About eight years ago he observed a black bowel movement. His family physician put him on a diet and instructed him to work. About Christmas 1940, he again observed a black bowel movement. His family physician was ill, and the physician who was called in told him that he had a bleeding ulcer, that his condition was serious, and put him to bed on a strict ulcer diet. Although his black bowel movement lasted only a day, he remained panicky. Despite the reassurances of his physician, he developed insomnia, incapacity for any sustained effort, loss of appetite, and loss of weight. Late in January he went to Florida, did not improve, and on his way home developed dizziness with some blurring of vision. Since then he has been preoccupied with his visual difficulties. He sees all sorts of lights and shadows before his eyes and continually tests his eyes. His eyes have been refracted several times, and despite assurances by eye specialists he has continued to fear that he would become blind.

He was first seen on September 3, 1941, when objective studies, including most careful eye studies, were entirely negative. His psychiatric study disclosed marked anxiety about his vision, and at first no other abnormalities. He felt that he had nervous exhaustion and that he should be kept on a régime of bed rest, which he had had for some time. He was assured that he would do much better on a program of activity and accordingly was admitted to a sanatorium where he played golf, worked on the grounds, walked, and kept physically active. Along with that, psychotherapy was carried out. The latter may be summarized as follows.

At each interview he commenced with complaints about his eyes, and was repeatedly assured that his eyes are quite normal, and that his complaints were a result of some emotional disturbance. He then stated that his wife was at the bottom of it all; that while she is clever and physically attractive he knew that their marriage was a failure from the day that they were married; that there was always a barrier between the two of them; that they loved each other as much as they were capable of, but that neither of them was capable of real love; that he often felt that if he were divorced he would feel better. At subsequent interviews he expressed a feeling that his parents as well as his twin brother were incapable of real love; that the many people whom he successfully put in business were unhappy.

In the course of about two weeks his anxiety began to subside. He began to sleep better and his eye symptoms became less frequent and severe. However, he stated that what he would like to do, if and when he got over his nervous breakdown (and he now considered his eye condition as part of the nervous breakdown) would be to return to business, divorce his wife, and live on a farm for the rest of his life. He was then asked if he preferred to live alone, and he promptly replied that he would like to have his mother with him, since he knew that with her he would be happy. In this and in the next interview he was guided in relating the relationship between his mother and himself from early childhood on. At the end of the third week he volunteered that he did not realize how attached he had been to his mother, and began to understand why his wife was so resentful regarding their relationship. At the end of four and one-half weeks he stated that he was glad that he and his wife had not separated and he knew there was a fundamental change taking place in his attitude. His eye symptoms became relatively mild; he ate and slept well and enjoyed his activities most of the time. In one of these interviews his eye symptoms increased somewhat, and he was informed that there must be some reason for the fact that the emotional difficulties settled on the eyes. He was asked to relate whether he had had any eye trouble earlier in life. He thought for a while and stated that he did not know of any. The room was then darkened and he was asked to close his eyes and tell anything that came into his mind that might have some bearing on the case. After a while he was startled by a great many associations that came into his mind. Since early childhood he had had a horror of glasses. At the age of about 10 his brother's eyes were refracted and he was given glasses, an experience that filled both brothers with horror. Later in life he avoided any girls who wore glasses. Whenever he got a cinder in an eye he became actually panicky. At the age of 20 he had a purulent conjunctivitis and was horrified for several hours when his eyes were completely closed. In the latter part of 1940 when he worked long hours on figures and on counting threads of textiles, he had a momentary fear that something might happen to his eyes. At the end of this interview he volunteered that he had had a fear of visual difficulties since early childhood. He was then told the story about the pearl necklace by Guy De Maupaussant (which he knew), at which he merely said, "I see what happened."

At present he is quite calm and discusses his difficulties quite objectively and without the volubility of a hysterical individual. He says, "I believe I understand my relationship with my mother and with my wife. I am quite sure that my nervousness did not begin at Christmas of 1940, and I can see why my trouble centered on the eyes. I am still not well, but I know that I am headed in the right direction."

Comment.—This case illustrates many factors in psychopathology and psychotherapy, but especially the processes of ventilation and desensitization as they take place in actual practice. This case could have been managed by just "a good doctor" who had sufficient time.

TREATMENT OF SYMPTOMS

The more common and important symptoms of neuroses consist of general tension and anxiety, abnormal fatigability, insomnia, fears of death and insanity, complaints referable to the heart and gastrointestinal tract, and pains in various parts of the body. Symptoms may be referable to any system in the body. Theoretically symptoms as such should be ignored, since they are merely manifestations of an underlying psychopathologic process which it is our main aim to correct. Practically, it is often necessary to pay wholesome attention to the complaints.

There are certain general principles in the treatment of symptoms:

1. *Avoidance of avoidable surgery.*—Focal infections play no rule in the fundamental psychopathology of neurosis. For example, the removal of doubtfully diseased tonsils should not be preceded by the promise that it will cure the neurotic manifestations. The removal of a large fibroid tumor should be preceded by the statement that it will probably have no effect on the fear of insanity or abnormal fatigability and daily headache which existed for ten years.

2. *Explanation of the evolution of the symptoms from faulty emotional reactions.*—The patient should not be told that they are imaginary and that he should forget them. If circumstances permit, some explanation should be given as to how anxiety may give rise to such physiologic disturbances as tachycardia, vomiting, crampy pain, frequent mucous stools, etc. He should be told that medication, dietetic treatment, etc., are given only for the secondary manifestations and will not affect the basic disturbance. For the same reason ritualistic procedures (including diet ceremonials) should be avoided that further complicate the already muddled existence of the patient.

3. *Physiologic and psychologic symptoms should not be neglected* while the patient is under psychotherapy. It is true that as ventilation and desensitization reach a satisfactory level the symptoms will become less severe, but it is equally true that a markedly tense, anxious, and restless patient will be benefited by removal from home to a hospital and sanatorium and that general weakness and easy fatigability will be allayed by rest in bed from a day or two to two to four weeks. The fatigue should not be ascribed to actual overwork which by itself is rarely a cause of neurosis. Malnutrition requires proper alimentation, vitamins, tonics, etc. Gastrointestinal symptoms, though secondary, should be corrected by a suitable dietary regimen until the patient "finds himself." Insomnia should be treated with great care. The psychoneurotic, unlike the manic-depressive individual, is apt to become a drug addict. Nevertheless, in the early acute stages of a neurosis, or of a recurrence of a neurosis, somnifacients at night and sedatives through the day are almost indispensable. As the tension disappears it will be easy in the majority of cases to dispose of both somnifacient and sedatives. Phobic and panicky attacks are best not treated by medication, since this often interferes with psychotherapy. In some cases phobic symptoms can actually be cured by reconditioning and training, and the least that one can do is not to encourage fear reactions by giving them false crutches.

TREATMENT OF ANXIETY NEUROSIS

By this is meant an episodic occurrence of anxiety, accompanied by somatic symptoms, especially palpitation, trembling, sweating, and general weakness, and by complete or nearly complete freedom from symptoms between attacks. The precipitating causes of anxiety neurosis are in the immediate present or in the recent past, the most common being unsatisfactory sexual experiences (such as coitus interruptus, sudden cessation of masturbation in late adolescence, etc.) or threats to economic or social security. The following cases are illustrative.

Case 3.—A. W., aged 32, married, with one child and a negative family and past medical history, for 9 months has had one or two attacks weekly, occurring usually in the evening and beginning with apprehension accompanied by palpitation, a feeling of coldness, trembling followed by excessive perspiration, and marked weakness, lasting 1½ to 2 hours, and then followed by complete freedom from symptoms until the next attack. The physical and neurologic examinations were negative, and routine laboratory studies including basal metabolic rate were also negative. Further investigation revealed that the husband used coitus interruptus which was unsatisfactory to the patient from a physical standpoint and in addition kept her in constant fear of pregnancy. The use of a proper contraceptive technic resulted in complete recovery.

Case 4.—B. S., a man of 29 years, had repeated attacks, the cause of which could not be found. About 6 months after the onset of his attacks he was arrested for having been in the "numbers" racket in Philadelphia. After being convicted and while serving for 9 months in prison, he had no attacks. He told the prison physician that he was glad it was all over and that he felt perfectly well. This occurred several years ago, and the patient remains well.

The treatment of anxiety neurosis is usually satisfactory. The cause should be removed if this is at all possible. When the cause cannot be removed, the patient must develop substitutive activities such as new interests and recreational outlets, and in some cases compromise formations.

TREATMENT OF CONVERSION HYSTERIA

Conversion hysteria is characterized by the presence of motor, sensory, visceral, and episodic phenomena (conversion symptoms) accompanied by little or no anxiety, not due to any primary physical or biochemical abnormality, and traceable to some definite psychogenic cause.

Conversion hysteria occurs in individuals who are hypersuggestible and emotionally immature. In conversion hysteria there is always a motive either to obtain something otherwise unobtainable or to escape a situation which is unbearable. The ordinary traumatic neurosis has a large element of conversion hysteria, the motive of which is not difficult to find.

Other precipitating causes in this group of cases are usually not difficult to find, and are often related chiefly to marital difficulties, death in the family, or to a feeling of economic insecurity. Suggestion in some form is probably the first method of treatment to be employed in these cases. Attempts at compromise formation in marital and economic difficulties also require and deserve considerable attention. The end-result in these cases is usually good provided the cause can be removed or the patient is induced to make some compromise. The following is an illustrative case.

Case 5.—L. S., aged 24, single, of no definite vocation, has been bedridden for 14 months because of severe pain in the back. Both parents drink to excess but make satisfactory social and economic adjustments. Early in life the patient, following scarlet fever, developed marked impairment of hearing. She completed high school, but in her first year at college developed a painful knee which totally incapacitated her for almost a year. The pain in the back followed a fall while in Bermuda and was variously diagnosed traumatic spondylitis, severe injury to the ligaments and muscles of the vertebrae, hematomyelia, and a variety of other conditions, depending on the leanings of the specialists who examined her.

Objective examination disclosed a well nourished, somewhat hypopituitary type of individual without evidence of any visceral disease. She was lying quietly in bed and appeared to have no pain until an attempt was made to prop her up or move her lower limbs. She then complained of pain in the back and inability to move her limbs, accompanied by a strong innervation of the antagonistic muscles. Except for a functional stocking-type anesthesia of the lower limbs, the neurologic examination was negative.

According to the parents, this patient had no reason to worry, and they were quite convinced that the patient had some grave, possibly incurable disease. The patient herself was not freely accessible during the first examination, but even during the two-hour interview a satisfactory rapport was established.

Based on the total absence of any organic abnormalities and the general attitude of the patient a diagnosis of conversion hysteria was made, and it was suggested that she be moved to Philadelphia for psychotherapy. The parents did not consent to this until three months later, since they were convinced that I was on the wrong track, and since I insisted that there should be no visiting, telephoning, correspondence or other communication between the patient and other members of the household until she will have recovered.

For the first few days of her hospitalization I had my hands full with the patient, nurses, internes, and resident. I spent about three hours during which I learned that she had always considered herself unattractive physically, handicapped by difficulty in hearing, and felt defeated from a social standpoint. Some months prior to her trip to Bermuda she made the acquaintance of a man almost twice her age. They became quite serious, and this was the first time that she felt that a man was genuinely interested in her as a woman. He had been separated from his wife, and they planned to be married when he should be free. The patient's parents were definitely opposed to this match and prevailed upon her to discontinue seeing this man. Her trip to Bermuda was part of her parents' plan to separate the pair. This information was secured from the patient piece-meal, and her concluding remark was, "I don't see any connection between this affair and my bad back." The examiner made no comment on this situation.

On the night of admission to the hospital she was given 7½ grains of sodium barbital. The following day she had massage of the back with instructions to the physical therapist to accompany the various maneuvers by the statement that she was loosening the tight muscles. The nurses and doctors were instructed to encourage her in every possible way. By the end of the first week she was out of bed; by the end of the third week she was riding a bicycle. She was discharged in five weeks, and at the end of seven weeks began to work in her father's newspaper office as a full time typist. She has remained well.

Comment.—The invalidism in this case was traceable to the personality make-up as the predisposing cause, and to an attempt to punish her parents and "hibernate" as an exciting cause. The relief of symptoms was accomplished almost entirely by various forms of suggestion.

CONCLUSIONS

For the practical treatment of the common neuroses the physician must be prepared to devote considerable time with his patient. He must acquire a few fundamental principles in psychopathology which should enable him to have a clear formulation of the problems in the individual patient. The success of treatment in the majority of cases depends upon a thorough knowledge of a few therapeutic procedures applicable to most of the neuroses and special procedures in the treatment of some types of neuroses and symptoms. What not to do in the treatment of neurosis is also very important.

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THE USE OF BLOOD SUBSTITUTES BY THE ARMED FORCES*

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THE recognition of the value of human plasma and serum in the treatment of shock and hypoproteinemic states represents one of the most important recent advances in medical science.

HUMAN PLASMA

The present war has emphasized the necessity of having on hand a therapeutic agent which can be used effectively in the emergency treatment of traumatic shock, hemorrhage, and burns produced by splinters from high explosive shells, bombs and torpedoes. The successful treatment of shock depends upon the availability of an effective therapeutic agent which is safe and easy to administer. Human plasma can be stored for long periods, and, since blood typing is unnecessary, it can be given promptly. In the treatment of traumatic shock and burns it is definitely superior to whole blood in that it corrects the increased viscosity (hemoconcentration) and decreased blood flow resulting from diminished blood volume. Thus, it is the therapeutic agent of choice in the emergency treatment of secondary shock irrespective of etiology.

It has long been known that one important feature of secondary shock is a decrease in circulating blood volume. This loss of blood volume, except in hemorrhage, results initially from loss of plasma into the tissues in and near the site of injury.[1] In a crushing injury of the hand or forearm 600 c.c. of fluid may be lost into the tissues. More severe injuries produce a much greater fluid loss. The local loss of fluid produces a vicious cycle involving compensatory vasoconstriction, hemoconcentration, venous stasis, decreased blood flow, anoxia, increased capillary permeability, generalized fluid loss into the tissues, and fall in blood pressure. If this picture of progressive deterioration is allowed to continue it will become irreversible and treatment may be of no avail. The most important single requirement in the successful treatment of secondary shock, regardless of etiology, is the prompt restoration of circulating blood volume. This can be accomplished effectively by the administration of 750 to 2,500 c.c. of normal plasma. The replacement of the lost fluid elevates the blood pressure, decreases the viscosity of the blood, and provides a fluid medium for the proper circulation and oxygenation of red cells so necessary to relieve the tissue anoxia and restore normal tissue metabolism.

The fluid loss in acute hemorrhage differs from traumatic shock in that cellular elements as well as plasma are lost. Once this occurs the vicious cycle is essentially the same as that seen in secondary shock resulting from trauma, burns and other causes. Death from hemorrhage is not due to loss of red cells but to the depleted circulating blood volume. The severely anemic individual, with one and a half to two million erythrocytes per cu.mm. of blood, does not manifest clinical symptoms of shock because he has an adequate circulating blood volume. The fluid loss in severe hemorrhage, as in traumatic shock and burns, can be effectively restored by the administration of plasma and if necessary followed later by whole blood transfusion.

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* Read at the Thirteenth Annual Scientific Assembly of the Society, October 2, 1941.

As early as 1918, Ward[2] of the Royal Army Medical Corps made an unheeded plea for the use of human plasma in the treatment of war casualties. In 1936, Elliott[3] used untyped plasma in the treatment of traumatic shock. During the next two years several investigators advocated the use of human plasma and serum in the treatment of traumatic shock and burns. The beginning of hostilities in Europe in 1939 created an increased general interest in the use of human plasma in the emergency treatment of shock.

THE PLASMA PROCUREMENT PROGRAM

Early in 1940 the Allies suffered severe reverses at the hands of the highly mechanized German armed forces. The Surgeons General of the Army and Navy realized that due to the gravity of the international situation our Armed Forces should be prepared for any eventuality.[4] Almost simultaneously in May 1940 they requested the aid of the National Research Council in determining and obtaining large quantities of the best blood substitutes for use in the armed services. As a result of these requests two committees were appointed, a Committee on Blood Transfusions and a Subcommittee on Blood Substitutes. These committees were informed of the problems confronting the Army and Navy in the procurement of adequate quantities of suitable blood substitutes.

Because of the lack of uniform opinion at that time as to the best method of preparing human plasma for use in the military forces, the members of these committees investigated methods of preparing plasma and serum, means of blood procurement, transportation and preservation of whole blood. From these studies it was concluded that dried plasma was the blood substitute of choice for use in the armed services because of its ease of preservation, long storage and effectiveness.

Based on the recommendations of the Blood Substitutes Committee of the National Research Council, a program was formulated to furnish 200,000 packages of dried plasma for use in the Army and Navy, each package to contain the dried material obtained from 250 c.c. of original plasma, a bottle of sterile pyrogen-free distilled water, and the necessary intravenous equipment. A program of this magnitude required the participation and coöperation of (1) the general public, (2) the American Red Cross, (3) commercial biologic firms, (4) the Army, (5) the Navy, and (6) the National Research Council.

The part each of these organizations play may be briefly outlined as follows:

1. *The general public.* The success of a blood plasma program of this scope must depend primarily on the willingness of the general public to voluntarily contribute blood.

2. *The American Red Cross.* With hundreds of chapters in various cities this organization is well fitted for the enrollment of voluntary blood donors. In addition it is financing all costs incident to the collection and shipment of blood to the commercial biologic firms. Blood donor centers have been established in the East and Middle West, and additional blood collecting stations are being established in other parts of the country.

3. *Commercial biologic laboratories.* Licensed laboratories were selected according to geographic location and inspected to determine their facilities for preparing dried plasma. These firms were then given contracts to process dried plasma in accordance with specifications prepared by representatives of the Army and Navy.

The blood is collected at the various blood donor centers and shipped to these firms from a radius of several hundred miles. The blood is then centrifuged, serologic tests made, the plasma pooled and cultured, and the required amount (300 c.c.) of liquid plasma placed in the final containers and promptly frozen. The plasma is then dried from the frozen state under high vacuum. After desiccation has been completed the material is sealed and packaged for shipment.

4. *The Army.* In order to avoid multiple contracts, the Army Procurement Division, Medical Depot, New York City acts as purchasing agent for all plasma prepared commercially for use in the Army and Navy.

5. *The Navy.* The dried plasma for purchase by the Navy is shipped direct to one of the Naval Medical Supply Depots. It is then distributed to the ships and Naval Stations beyond the continental limits of the United States. Other Naval activities are supplied with plasma prepared at the Naval Medical School, Washington, D. C.

6. *The National Research Council.* The Subcommittee on Blood Substitutes of the Council meets at intervals with representatives of the Army and Navy, and the progress being made in the various phases of research on blood substitutes is reviewed.

The program as outlined is now functioning smoothly, and several thousand packages of plasma have been delivered. All combatant ships and other naval medical activities now have a supply of plasma on hand. It is anticipated that a large reserve supply will be available for the Army and Navy within the ensuing year.

Concentrated Plasma

Space is often at a premium in the armed services. This is especially true aboard combatant ships where most of the available space is required to maintain maximum fighting efficiency. In landing parties unnecessary bulk and weight must be sacrificed for the sake of speed and maneuverability. In an effort to provide a smaller package of plasma to be used by the armed forces, it was proposed that concentrated plasma be tried. It was given clinical trial at the Army and Navy Medical Centers, Washington, D. C. The conclusions based on these studies were that four times concentrated plasma was not as effective as normal plasma in the treatment of traumatic shock. These findings are in accord with those of Mahoney[5] and other investigators. As a result of this study and the experience of other investigators it was recommended that the Army and Navy use normal plasma and not concentrated plasma in the treatment of secondary shock.

Newer Blood Substitutes

Although human plasma is an excellent therapeutic agent for the treatment of shock and hypoproteinemic states, largely for economic reasons studies are being continually conducted in an effort to find other effective blood substitutes.

Human Albumin.—It is possible to separate the various fractions of human plasma.[6] The albumin fraction makes up 65 per cent of the proteins of the blood and exerts 85 per cent of the colloidal osmotic pressure provided by normal human plasma. One hundred cubic centimeters of 30 per cent human albumin exerts approximately the same colloidal osmotic pressure, when injected intravenously, as 1,000 c.c. of whole blood or 500 c.c. of normal plasma. Refrigeration of albumin is unnecessary and it can be packaged in a small unit ready for immediate use.

Experimental and clinical studies carried out in several large hospitals and at the Army and Navy Medical Centers, Washington, D. C., have proved it effective in restoring blood volume in shock. If shock and dehydration coëxist it is essential that other parenteral solutions be given in addition to the albumin.

These preliminary findings are encouraging, but more extensive experimental and clinical data should be obtained before albumin can be accepted as a satisfactory blood substitute for use by the armed forces.

Bovine Plasma.—Wangensteen and his associates[7] have given bovine plasma adequate clinical trial. Alarming systemic reactions often follow the use of this material, and therefore it cannot be considered a satisfactory blood substitute.

Bovine Albumin.—Cohn and his associates[6] used bovine plasma as a source of purified albumin. Janeway[8] has reported on the clinical use of this material and states, "It is too early to evaluate work of this type but it represents an important approach to the problem of providing cheap and readily available blood substitutes."

Crystalline Hemoglobin.—In searching for a blood substitute which would not only aid in restoring blood volume in shock but also be able to carry oxygen, a number of workers investigated the feasibility of using crystalline hemoglobin. Fairly large amounts may be administered to humans without untoward reactions. However, the quantity needed in the treatment of shock is considered dangerous. In the presence of an acid urine, hemoglobin may be precipitated in the kidney tubules with resultant anuria and kidney damage.[8] The anuria following blood transfusion reactions may be due to this mechanism. Crystalline hemoglobin cannot be considered an adequate blood substitute.

Casein Hydrolysate.—Whipple and his associates[9] have demonstrated that casein hydrolyzate (a mixture of amino acids and polypeptides derived from casein) given intravenously stimulates plasma protein production. It is not indicated in the treatment of shock but may be used to combat hypoproteinemia in patients unable to take protein foods by mouth. In the strict sense of the word it should not be considered as a blood substitute.

Isinglass.—Recently Taylor and Waters[10] prepared a solution of fish gelatin or isinglass. They have shown that it is effective in restoring blood pressure in dogs following hemorrhage. It is entirely too early to evaluate this work.

Pectin.—Hartman and his co-workers[11] have reported on the use of pectin as a blood substitute in the treatment of shock. Pectin is apparently a nontoxic, nonantigenic, colloidal carbohydrate having a relatively high molecular weight and somewhat complex composition. When injected intravenously it is eliminated by the kidneys in approximately 72 hours. Although preliminary experimental and clinical studies indicate that pectin solutions are valuable in the treatment of shock, this product must undergo exhaustive studies before it can be considered a dependable blood substitute.

SUMMARY

1. Human plasma is an effective therapeutic measure in the treatment of traumatic shock, with or without hemorrhage, burns, and hypoproteinemic states. It is the only blood substitute in which all the normal constituents of the liquid portion of the blood can be preserved.
2. The Army and Navy plasma procurement program has been outlined.
3. Dried plasma, because of its ease of preservation, long storage period, and effectiveness, is the blood substitute of choice for use in the military services.
4. Although some of the newer blood substitutes may be effective in the treatment of shock, until they have undergone rigid clinical trial they should not be accepted for use by the armed forces.

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(*Continued on page 40*)

SURGERY IN THE OFFICE*

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WHILE it has been said, perhaps with a modicum of truth, that there are more minor surgeons than minor surgery, nevertheless there is a place for surgery in the office.

No one can question the propriety of such a procedure, but the type of surgery undertaken demands mature consideration, since occasionally it is a subject of justifiable criticism. Certain premises must be assumed, namely, that the physician is competent both in the matter of judgment and skill, that the equipment is adequate, and last, but not least, that it is to the best interests of the patient.

One would be bold indeed to indulge in a discussion of the qualifications of the surgeon or physician to undertake minor surgery in the office, and I shall omit it. Several general matters of some moment should be given serious thought since they relate to the care of the patient and the protection of the operator. Before a patient is advised to submit to an operation in the office, some details should be considered, among which are these: The patient should be coöperative, that is, if he prefers to have the operation in the office, he must prepare himself as directed and must be depended upon to keep the appointment. When a patient is persuaded to use the office instead of a hospital or if he objects to a local anesthetic or is highly emotional, I predict that the operation in the office will fall short of expectations of the patient or the physician. Children as a rule are not good subjects, chiefly because they are mentally immature and unable to grasp the full meaning of the entire procedure and consequently do not carry out the part assigned to them. Patients in poor physical condition, with myocardial disease, coronary occlusion or hypertension, for instance, should be rigorously avoided, since they have an uncommon habit of passing away before, during, or just after a minor operation. It is a wise precaution to have a third party, the office nurse or a relative of the patient, if not in the operating room, at least within the sound of your voice. Routine events, while in themselves of a trivial nature, may mount to formidable proportions during the course of a minor operation. The occurrence of syncope, the failure of the electric current, the possibility of breakage, the annoying telephone, the unexpected visitor, the unwelcome thunder shower, are only a few of the interruptions that can materialize to disturb the equanimity of the surgeon.

Many minor operations have been unsatisfactory or sources of serious embarrassment because of the failure to recognize complications that were not anticipated. Of the skill of the physician, there is nothing I can state that is worth stating, except that every surgeon should try to appreciate his limitations and remain within them.

The preparation of the surgical field is often neglected or done in a perfunctory manner. The mere sponging with alcohol is routine in many offices, but it is only a question of time before this inadequate cleansing will reap its reward in infections. The use of benzene, acetone or ether, followed by alcohol and any acceptable germicide is recommended. I have eliminated tincture of iodine because of its variable reactions upon the skin. Sterile towels should protect the operative area, and care should be exercised that sutures, when used, do not drag over unsterilized surfaces.

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* Read at the Thirteenth Annual Scientific Assembly of the Society, October 1, 1941.

It is perhaps needless to call attention to the use of antitetanic serum without the precaution of the sensitization skin test. Regardless of whether the patient has had an injection of serum previously, this precaution should never be overlooked.

Rarely is any preoperative medication required for surgery in the office, but when a sedative is used, it should be used sparingly.

The choice of an anesthetic is not the least important item, and it is almost needless to emphasize the necessity of using a competent anesthetist in the case of general anesthesia. One must be certain that the patient has an empty stomach, that an emesis basin is at hand, and that towels and forceps for tongue traction are available. Failure to supply any of these essentials may substitute pandemonium for panacea.

The patient under a general anesthetic should not be left alone even for the briefest period, and after he has reacted, should be assisted from the table rather than permitted to make the effort alone. Patients have injured themselves and upset much equipment in an attempt to get up and dress without help.

A warning seems needless that sterilizers must be shut off and that no kind of flame or spark must be permitted in an operating room in which ether, ethylene or cyclopropane is used. Occasionally a fulgurating needle or cautery is used in the presence of these anesthetic agents, and only some kind act of Providence prevents an explosion.

Intravenous anesthesia has much to recommend it, but should be administered only by a qualified anesthetist. Local anesthesia is desirable in the majority of cases, and many excellent ones are available. Weak solutions with larger volume are preferred to concentrated solutions. It is my own opinion that cocaine has no place in office practice. The idiosyncracy experienced by the occasional patient has been the source of hair-raising dramas and even tragedies. There are too many excellent substitutes to worry over cocaine.

Local anesthesia should not be injected in close proximity to infected areas, and should be used with caution where a tourniquet is employed. For example, in opening a felon, the use of a tourniquet at the base of the finger in conjunction with local anesthesia may lead to gangrene of the entire finger, if the combined pressure of the tourniquet and solution are sufficient to produce thrombosis. A number of such cases have been reported.

The syringe for the injection of the anesthetic solution should have a capacity of 5 or 10 c.c. and a sharp, fine needle that locks on the barrel. The syringe and needle should be tested before they are used and an additional needle sterilized in case of a needle becoming bent, broken or contaminated.

Anesthetic solutions should be freshly prepared or used from ampoules and should not be made up from tablets dropped into sterile water and boiled. There is no assurance of sterility or potency by such a method.

Very few offices can furnish autoclave sterilization of instruments, but boiling for 10 minutes before and after each operation (and I stress "after") is an acceptable substitution. Dressings must be sterilized under steam pressure.

Surgeons could very well appropriate a nitrous oxide unit in common use by dentists. The patient holds the mask in place with one hand and pumps the gas in with the other. As soon as a state of analgesia is obtained, the patient involuntarily relaxes, drops the mask, and discontinues compressing the bulb. It is impossible to produce deep anesthesia by this method and it is consequently very safe.

In superficial infections, when an incision is necessary ethyl chloride will give enough anesthesia to allow painless evacuation of the circumscribed pus. For incision and drainage in deeper infections, local anesthesia is likely to be painful; intravenous or inhalation anesthesia should be used instead.

Foreign bodies are occasionally problems that remain unsolved. It is a good rule not to attempt to remove a foreign body in the office that cannot be definitely palpated. They should be reserved for local anesthesia or general anesthesia in an institution, possibly with the aid of a fluoroscope. It is well to remember that local anesthesia with infiltration will seemingly displace a foreign body or at least make palpation of it impossible, increasing the difficulty of its extraction.

Neoplasms are a fertile field for office surgery, and the temptation to remove them often outweighs sound judgment. Some of the pitfalls can be briefly mentioned. The excision of tumors from the female breast should never be an office procedure unless their benign character is definitely established. To remove a breast tumor and learn a week or two later that it is malignant not only creates an unfortunate situation, but it also disseminates the growth and thereby replaces a good prognosis with a bad one.

Pigmented moles should not be excised unless previously treated thoroughly by irradiation.

Every tumor of doubtful pathology should be submitted to the pathologist. If this rule is followed, some startling developments are in store for the operator and patient. Lipomata and sebaceous cysts offer practically no difficulty in macroscopic diagnosis.

Incised and lacerated wounds can be better cleaned and approximated if the edges are anesthetized.

Among the miscellaneous procedures which can be competently treated in the office are simple fractures of some of the extremities in which the deformity does not require extensive manipulation or complicated splinting. Injection of varicose veins and ganglia lend themselves particularly well to office treatment. Diagnostic aspiration of cavities containing fluid demands a needle of sufficient lumen to remove thick exudates. While a fine needle may seem safer, tenacious or dense fluids will not flow through it and necessarily fail to divulge the nature of the contents of the sac or cavity.

In connection with all operations done in the office, it is a wise precaution to delay the departure of the patient until he is quite himself and is advised that some pain or discomfort may follow for a few hours. Providing the patient with a sedative or a prescription for one may obviate a night call. The patient should be informed that the dressing may show a blood stain before the next office visit, but that if the bleeding seems excessive he should communicate with the surgeon or a designated substitute. The possibility of swelling which so frequently follows an operation, thereby increasing the tension on the dressing, should not be forgotten and the patient further advised to adjust or cut the dressing or phone in for instructions in such an event.

To neglect to take into account what may seem a trifling matter to the physician may eventuate in a major complication from the patient's standpoint.

While discussion of the fee may not be within the scope of this paper, it is a matter of interest to both the physician and the patient. Should the patient desire to know in advance the approximate expense he will incur, a given amount should be named, with the proviso, if necessary, that complications may increase the cost. Under no circumstances does it seem justifiable to evade such a question with the statement that it cannot be estimated or that it will be made all right or any such flimsy camouflage. Many persons feel that it is almost sacrosanct to mention a fee. We have found that the subject can be tactfully introduced. Plain, straightforward financial dealings in a doctor's office are just as much in order as in a bank and help to maintain those cherished relations which usually exist between doctor and patient.

CLINICO-PATHOLOGIC CONFERENCE*

THE DEPARTMENT OF MEDICINE, GALLINGER MUNICIPAL HOSPITAL

CHRONIC CONSTRICTIVE PERICARDITIS SUCCESSFULLY TREATED SURGICALLY

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September 25, 1941.

Dr. Yater: Dr. Multhauf, the resident on ward K, will present the next case.

Dr. C. J. Multhauf: This little colored girl, now 13 years old, was first admitted to this hospital 7 years ago at the age of 6 years, on August 9, 1934, complaining of abdominal pain, precordial pain, unproductive cough, and shortness of breath of 5 days' duration. She was very irrational and had a fever of 103°F. Physical signs suggestive of pericardial effusion were elicited, and the liver was enlarged downward to the umbilicus and moderately tender. The existence of pericardial effusion was confirmed by roentgenographic examination (fig. 1). On paracentesis of the pericardium approximately 150 c.c. of blood-tinged fluid was aspirated. Two other aspirations were subsequently performed with the same result. During the 6 months she remained in the hospital there was daily but diminishing fever, and the liver remained enlarged and the abdomen distended. On discharge there was still evidence of some pericardial effusion and a small effusion at the right lung base with a small area of pneumonitis and thickening of the pleura. Smears and cultures of the aspirated pericardial fluid did not reveal any organisms of etiologic importance. A guinea pig inoculation was negative for tubercle bacilli. A tuberculin skin test was negative. There was a mild anemia and moderate leukocytosis. All other laboratory tests were negative. An electrocardiogram showed only sinus tachycardia.

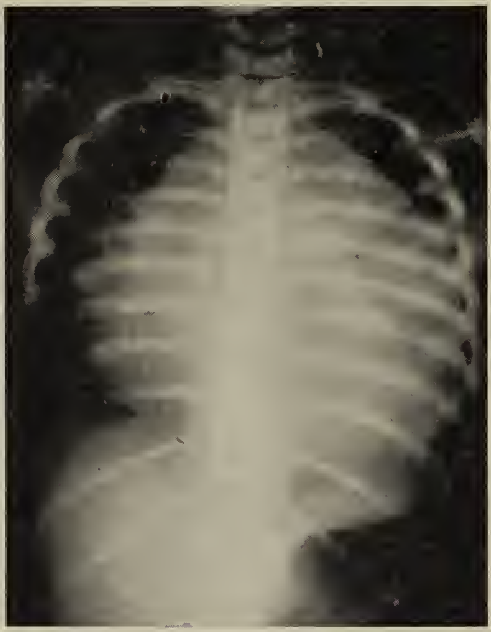

Fig. 1. Pericardial effusion at age of 6 years, August 10, 1934.

The child reëntered this hospital on July 22, 1941 with the complaint of recent periumbilical

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* These conferences are held under the Chairmanship of the Head of the Department of Medicine, Dr. Wallace M. Yater, every Thursday from 2 to 4 p.m. Cases of particular interest, or those presenting diagnostic problems, are presented and discussed. This is a resumé of the discussion of such a case.

pain of a constant dull aching nature, later localizing in the right lower quadrant, accompanied by vomiting. The temperature was 102°F., the pulse rate 110 per minute, and the respiratory rate 36 per minute. The leukocytes of the blood numbered 21,200 per cu. mm., with 35 per cent segmented forms and 35 per cent band forms. The urine was negative. The temperature returned to normal in 2 days and remained so.

She had had enlargement of the liver and distention of the abdomen since her previous admission, and puffiness of the face had been noted from time to time, more marked in the morning. Her only other illness had been whooping cough.

Physical examination revealed a moderately thin girl, somewhat small for her age, alert, coöperative, and lying comfortably in bed. Her temperature was now normal, her pulse rate 88 per minute, and her respiratory rate 20 per minute. There was some edema of the face, more marked on the right side, and more notable in the eyelids. The veins of the neck were moderately distended when the patient was sitting. There were some abnormal physical signs in the region of the right lower lobe, but these were apparently not important and disappeared later. The heart seemed to be slightly enlarged to the right but not to the left. The apical impulse could neither be seen nor felt, the heart sounds were clear, and the rhythm was regular. No murmurs were audible. The blood pressure in the right arm was 100/70, in the right thigh 110/80, and in both the left arm and the left thigh 100/75. The abdomen was slightly distended and tympanitic without evidence of ascites. The liver extended downward 4 fingerbreadths; it was not tender, and its edge was sharp and pliable.

Many laboratory tests have been performed. Urinalysis was normal. The hemoglobin was 75 per cent and the erythrocytes numbered 4,000,000 per cu. mm. of blood on admission. Today the hemoglobin is 92 per cent, the red blood cells number 4,630,000, and the white blood cells number 8,600 with 61 per cent segmented forms, 9 per cent band forms, 24 per cent lymphocytes, and 6 per cent monocytes. The blood urea nitrogen was 11 mg. per cent, the blood nonprotein nitrogen was 28 mg. per cent, and the serum proteins were 6.06 grams per 100 c.c. of blood with 3.72 grams of albumin and 2.34 grams of globulin. Three stool examinations were negative for ova, parasites and blood. An electrocardiogram showed a PR interval of 0.20 sec. and inversion of the T waves in all leads.

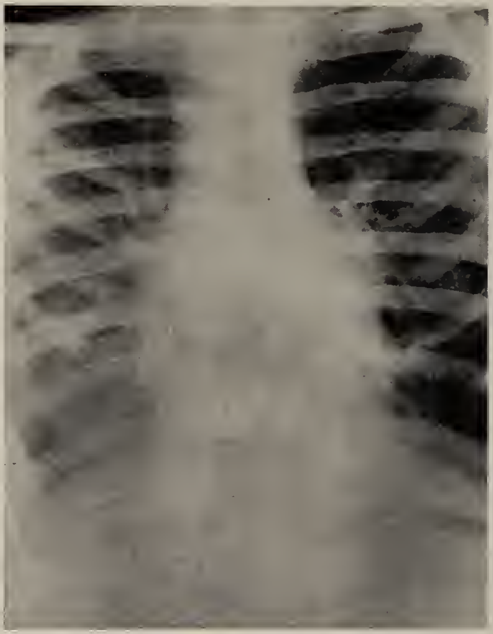

Fig. 2. Before pericardiectomy at age of 13 years, July 26, 1941.

Because of the coëxistence of a small quiet heart, a large liver, and the abnormal electrocardiogram, together with the history of previous acute pericarditis with effusion, the diagnosis of chronic constrictive pericarditis causing chronic cardiac compression was entertained. Fluoroscopic examination of the chest abetted this opinion. The heart was small and centrally placed, there was diminished pulsation except in the region of the outflow tract of the left ventricle, and a thin line of increased density along the left border suggested some deposition of calcium. The heart moved freely with change of position of the trunk. The lung fields were essentially clear, with some accentuation of the pulmonary vascular shadows. The diaphragm showed evidence of adhesions bilaterally. This is the roentgenogram (fig. 2).

Several venous pressure determinations were made. The most reliable readings were as follows:

Right arm, resting	255 mm. of normal saline (Normal, 40 to 120 mm.)
Right arm, after opening and closing the fist several times	260 mm.
Left arm, resting	232 mm.
Left arm, after exercise	238 mm.
Left arm, after pressure over the liver	290 mm.
Right femoral vein	210 mm.
Left femoral vein	218 mm.

Arm-to-tongue circulation time, using magnesium sulfate solution, was 14 seconds (normal, 9 to 16 seconds). Arm-to-lung circulation time, using ether, was 8 seconds (normal, 3.5 to 8 seconds).

Electrocardiograms were made with the patient in various positions and no change of the electric axis was obtained.

Dr. Yater: The staff is to be congratulated on making this fine diagnosis, especially since there was no ascites to arouse suspicion. Although Beck's diagnostic triad is "a small quiet heart, ascites, and high venous pressure," our experience has been that ascites is more often absent than present. Certainly, its absence should not prevent one from suspecting the possibility of the condition. I would prefer to change this triad to "a small quiet heart, enlarged liver, and high venous pressure." Hepatomegaly is more constantly present than ascites. This case is of particular interest in that we observed the patient during her original attack of pericardial inflammation. Often the acute phase of the disease passes unrecognized. It is significant that an etiologic agent was not discovered. This is a common experience; in fact, it is unusual to determine the cause, although occasionally the pericarditis is produced by the tubercle bacillus, by a staphylococcus, or by the pneumococcus. Rheumatic fever is apparently never the cause. Whatever the etiologic agent may have been, the result is a thick scar encasing the heart; this may or may not contain calcium. The roentgenogram here shows the possible presence of some calcium. Of our 6 other cases of chronic cardiac compression, there were 4 with a large amount of calcium. The scar also often involves the venae cavae as they enter the heart.

The result of this scarring of the pericardium is to hinder the inflow of venous blood into the heart and hence into the auricles and ventricles. Thus the venous blood is dammed back into the systemic veins. Also, the ventricles probably cannot contract to their best capacity because of the scar around them. Usually the circulation times are prolonged, but sometimes, as in this case, they are within normal limits. Does any one care to discuss the possible reasons for this rather paradoxical circumstance?

Dr. Hugh H. Hussey: It seems to me that two factors might account for this: one, peripheral vasodilatation, and two, an increase in blood volume.

Dr. Yater: I believe those two factors, which are known to obtain, do adequately explain the problem.

The symptoms these patients have are not particularly helpful in directing our thoughts in the right diagnostic direction. There may or may not be dyspnea on exertion, and orthopnea does not occur. Palpitation of the heart is not uncommon. Dependent edema and cyanosis are both rare except in the very advanced stage. Dyspepsia is not unusual, probably because of the engorgement of the liver. Some weakness and so-called neurasthenic symptoms are rather frequently noted, probably because of the general impairment of the circulation. The clinical picture of congestive heart failure is not seen.

I shall review briefly the 6 other cases we have had.*

One of our other patients is here today. He is 60 years old and has not had any symptoms referable to the circulatory system. His main complaint is dyspepsia, and we have found that he has a duodenal ulcer. His roentgenogram shows a heavy deposit of calcium throughout the pericardium, and the venous pressure is over 200 mm. I shall ask Dr. Hussey to demonstrate on this patient the method of determining the venous pressure.†

Our little negro girl had an interesting sign in the edema of the face and eyelids. This was probably due to a more than usual amount of compression of the superior vena cava. The venous pressure in the arms is much higher than in the legs.

The electrocardiogram is often abnormal in these cases. There may or may not be low voltage. Inversion of T waves is common. This is our third case with first degree auriculoventricular heart block. Two of our patients had auricular fibrillation, and 2 had right axis deviation. Although some degree of decrease in the shift of the electric axis with change of decubitus is common, there may be no decrease. This feature does not proceed pari passu with the apparent movability of the heart as determined fluoroscopically. In fact, in this little girl the heart appears to be freely movable, but there is fixation of the electric axis.

Dr. Edgar Davis, our thoracic surgeon now on service, is with us today, and I should like to ask him whether he believes he can help this girl by an operation.

DR. EDGAR DAVIS: Yes, Dr. Yater, I believe this girl should be operated on. She is young, and we have found her before she has reached an advanced stage. The operation is not technically difficult if adequate exposure is made. We now remove the fourth, fifth and sixth costal cartilages. As much of the pericardium as possible should be excised, including the scar at the mouths of the venae cavae. The question of what part of the heart should be attacked first is still problematic, but the consensus is that the scar should be removed from the left ventricle first in order to free that part of the pump for the increased load it will be carrying when we have liberated the inflow tract of its obstruction. A two-stage operation may be necessary. The surgeon needs the coöperation of the internist in these cases, and I believe the postoperative course is handled best if the patient is returned to the medical pavilion.

DR. SOL KATZ, JUNIOR MEDICAL RESIDENT ON WARD K: Dr. Yater, do you believe it advisable to digitalize patients with this disease prior to operation? Burwell and Blalock think that digitalization is important to prevent them from having heart failure when the additional load is thrown on the ventricles with the sudden inflow of more blood after the release of the constriction.

DR. YATER: I do not think digitalization is necessary. It is true that after years of cardiac compression some atrophy of the myocardial fibers results, but if one allows the patient to resume his activities slowly, the fibers undoubtedly regain their original size and tone. At least, our patients have not shown any evidence of heart failure after operation.

October 23, 1941.

DR. YATER: The little colored girl with chronic cardiac compression was operated upon this morning by Dr. Edgar Davis. Dr. J. Ross Veal, Chief Medical Officer in Surgery, assisted at the operation and is here to tell us about it.

DR. J. ROSS VEAL: Under basal avertin, ethylene and ether anesthesia, the operation was begun at 10:35 a.m. and ended at 1:10 p.m. A vertical incision was made medial to the left nipple and carried horizontally and medially along the sixth rib. The pectoralis major muscle was cut at its sternal insertion and turned back laterally, exposing the ribs of the underlying region. The cartilaginous portions of the fourth, fifth and sixth ribs were removed subperichondrially, and the perichondrial layer was then opened, exposing the pericardium. This was white, tough and thickened but not calcified. An incision was made through the external layer, the epicardial portion of the pericardium being separated from the visceral. The two portions were firmly united and resection was slow and difficult, but by careful sharp dissection the thick constricting scar was removed. The dissection was carried up to the conus arteriosus and back as far as the pulmonary vessels on both sides. Over the junction of the right auricle and ventricle there was an old hemorrhagic area that looked like a bruise. At no time was the myocardium cut into. The left pleura, however, was cut while the pericardium was being freed from the pulmonary conus, and positive pressure anesthesia became necessary. Many times during the operation Dr. Davis stopped the dissection to give the heart a rest, when the blood pressure dropped below 90 mm. Hg or the heart rate exceeded 120 per minute. Dr. Multhauf determined the height of the blood pressure frequently. After thorough excision of the scar over the entire heart the parietal pleura of both sides was brought together in front of the heart with a layer for layer suture. The transverse thoracic muscle was closed with plain catgut, the pectoralis major muscle was resutured to its sternal attachment, and the skin was closed with black silk.

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* The cases were then discussed and roentgenograms shown. Three of the 6 patients had been successfully operated upon by Dr. Claude Beck of Cleveland, Ohio.

† Dr. Hussey then demonstrated the method to the assembly.

The patient was returned to the medical building in good condition.

DR. YATER: I was present at the operation and thought it was splendidly executed.

October 30, 1941.

DR. YATER: Dr. Katz has been giving constant attention to the little girl who had the pericardiectomy. Dr. Katz, will you report on her condition?

DR. KATZ: The postoperative course has been stormy. Nasally administered oxygen was started on the patient's return from the operating room. Her pulse rate was 140 per minute, the blood pressure was 100/70, the respiratory rate was 44 per minute, and the rectal temperature was 100.2°F. Five hours later she had fully reacted but was quite dyspneic. Her position was changed hourly, and she was encouraged to cough. The next morning her rectal temperature was 103.5°F., her pulse rate was 150 per minute, her blood pressure was 104/70, and her respiratory rate was 48 per minute. There was evidence of atelectasis of the lower half of the right lower lobe with retraction of the heart and mediastinum to the right, while on the left side there was evidence of early pneumonia and a little pleural effusion. The white blood cell count was 17,200 with a shift to the left, and the sputum revealed Type III pneumococcus. Sulfadiazine therapy was instituted immediately, and satisfactory blood levels were obtained. On the following day her blood showed an adequate amount of antibodies for Type III pneumococcus, and antipneumococcal serum therefore was not used. During the ensuing 4 days the patient remained dyspneic, although roentgenograms showed the atelectasis and pneumonia to be decreasing. Carbon dioxide inhalation and rebreathing through a paper bag have been used in an attempt to relieve the atelectasis.

DR. YATER: Dr. Eberson, can you report on the histologic examination of the excised pericardium?

DR. FREDERICK EBERSON, HOSPITAL PATHOLOGIST: The sections showed fibrous thickening of the pericardium, amorphous debris (possibly calcium), and mild cellular infiltration adjacent to the small blood vessels. No specific lesions of any kind were noted.

December 4, 1941.

DR. YATER: The little colored girl who had the pericardiectomy is to be discharged today.

Here she is, apparently none the worse for her trying hospital experience. Dr. Katz will tell us about her further postoperative course.

Dr. Katz: From the seventh to the twelfth day her condition seemed to be much improved. Her respirations were 30 per minute and less labored, her pulse rate was about 110 per minute, and her temperature remained about 101°F. She was eating well and resting comfortably. The wound was clean and healing by first intention. Sulfadiazine was discontinued, since it did not appear to be affecting the course of the pneumonia. Roentgenograms continued to show atelectasis on the right and a small amount of fluid and thickened pleura on the left. On the thirteenth day the temperature rose to 104°F., the pulse rate was 140 per minute, and the respiratory rate reached 40 per minute. There was evidence of pneumonitis of the right middle lobe. Sulfathiazole therapy was instituted and adequate blood concentration was obtained. For the next week the course was very stormy. The temperature ranged between 100°F. and 104°F., the pulse rate between 130 and 150 per minute, and the respiratory rate between 35 and 40 per minute. Carbon dioxide inhalations were continued. The temperature declined by lysis and the pulse and respiratory rates gradually became normal. Sulfathiazole therapy was discontinued after the pulse and temperature had been normal for 5 days. At this time the chest was clear except for slight atelectasis on the right side. On the twenty-seventh day the patient was allowed out of bed for 15 minutes morning and afternoon. This time was gradually increased, but only after she had been up in a chair for 4 hours daily was walking allowed. Her activity was slowly increased and is now unrestricted.

A roentgenogram of the chest shows the heart shadow about the same as before operation. There is still some atelectasis of the right lower lobe. Fluoroscopic examination shows excellent pulsation of the left border of the heart, but there is still considerable limitation of pulsation of the right side. Diaphragm movements are restricted.

The electrocardiogram is the same as before operation, but the PR interval is now 0.14 sec., as against 0.20 sec. before. Venous pressure determinations have been made weekly since the operation. The pressure has been about 210 mm. of saline solution each time with prompt rise to from 30 to 70 mm. on pressure over the liver. The latter is a little smaller but still reaches about 4 fingerbreadths below the right costal margin. The pulse rate varies from 74 at rest to 92 during walking. The eyelids are no longer edematous.

Dr. Yater: Do you consider this patient to be cured?

Dr. Katz: Not in the strict sense of the word, but for practical purposes probably so. Only time will tell.

Dr. Yater: Yes, but our experience leads me to believe that she probably will get along very well for some years at least. The fact that the venous pressure is still high and the liver enlarged does not mean that the operation was a failure. In fact, it is rare for the venous pressure to return to normal. There is undoubtedly still some obstruction of the inflow tract, but unquestionably much good has been done by removing most of the scar on the surface of the heart. I consider the prognosis to be good. There is no reason to limit the girl's activities, although for the next month I would advise her to be moderately quiet.

Editorials

1942—A WAR YEAR

As we enter upon the new year, we are just beginning to realize how much our lives have been affected by the events of December 7, 1941. We know now that 1942 will hold many difficulties and undoubtedly tragedies for us. But this is no time to fret over possibilities. There is too much at stake. All unnecessary peacetime pursuits must give way to the primary purpose of winning this war.

There is no group in this country which has played a more important role in preparedness plans than the medical profession. Much as physicians all over this nation have given to their country in preparation for this emergency, more will be demanded of them. For example, there follows an editorial entitled, "Military Services Need Physicians," in which there is a call for more volunteers to serve our growing Army and Navy. It may well be surmised that this is only the beginning. In addition physicians will be needed for Civilian Defense, Selective Service, and to care for the civilian population.

There is danger that the latter group may suffer from want of adequate medical attention unless care is taken in the assignment of physicians. In the zeal which must attend a war effort, the needs of the people back home may easily be neglected. This must not be permitted to happen. Whether the newly created Procurement and Assignment Service for Physicians, Dentists and Veterinarians will find it possible to control this situation will depend to a considerable degree on the coöperation of physicians and the judgment shown by responsible Government agencies.

We should resolve now that in 1942 we will live courageously and carry on in a cheerful manner. We might also take to heart the sage advice, "Take no anxious thought for the morrow. Sufficient unto the day is the evil thereof." We should, of course, be forward-looking. However, worry and anxiety will not serve the best interests of our country; fortitude, good cheer and hard work will.

MILITARY SERVICES NEED PHYSICIANS

Since our entry into the war, Congress has passed an amendment to the Selective Service Act which requires every man from twenty to sixty-five to register. All men under forty-five years of age are subject to military service. This drastic step was necessitated by the fact that it is imperative for us to mobilize the man power of the nation. There is great need for physicians in both the Army and the Navy. A call for volunteers has gone out from the Procurement and Assignment Service for Physicians, Dentists and Veterinarians. In the December 27 issue, the *Journal of the American Medical Association* editorializes as follows:

"At a meeting of the Procurement and Assignment Service held in Chicago at the headquarters of the American Medical Association on December 18, jointly with the Committees on Medical Preparedness of the American Medical Association, the American Dental Association and the American Veterinary Medical Association, plans were drawn for making immediately available to the United States Army and Navy Medical Corps the names of physicians who wish to be enrolled promptly in the service of the government in this emergency."

"For two thousand and nine counties in the United States, lists have been prepared indicating physicians who are engaged in necessary civilian projects, public health services or educational activities from which they cannot be spared. Shortly the rest of the counties will have such lists available.

"In each of the corps areas covering the United States a committee is being established, including representatives of medical, hospital, educational, dental and veterinary activities. In the individual states, committees of medical, dental and veterinarian professions are being established through which the corps area committees will exercise their functions. In each county also local committees will provide accurate information regarding the status of each member of the profession concerned.

"The raising of the Selective Service age from 28 to 45 will place a great number of additional physicians in the category of those on whom the nation may call as their services are needed. Estimates indicate that some sixty thousand physicians thus become available for service and that forty-two thousand dentists under the age of 45 also become subject to call. By enrolling with the Procurement and Assignment Service immediately . . . all physicians, but particularly those under 45 years of age, insure to every extent possible assignment to the type of service for which they are best fitted. They avoid thus also the possibility of unclassified service with the United States Army during the period that may be necessary following selection by the Selective Service before the commission can be secured."

On page 30 of this issue of the Medical Annals will be found an enrollment form which should be forwarded to the Procurement and Assignment Service by any physician who is prepared for immediate military service. The blank should be completed at once and mailed to Dr. Sam F. Seeley, Executive Officer, Procurement and Assignment Service, 4th and C Streets, S.W., Washington.

PREVENTIVE MEDICINE ON THE MARCH

Although the medical profession, like other groups, is primarily concerned at the present time with winning the war, it has other responsibilities which cannot be ignored. One of the most important is to safeguard the public health. In this connection the Medical Society of the District of Columbia has assumed definite obligations. It has adopted a Periodic Health Examination Program, the success of which is exceedingly important to the citizens of this community. The program will not be easily carried out by any means. At best it will require considerable time, energy and patience.

The Committee on Public Health is proceeding as rapidly as possible with its plans to make the program effective. It has standardized the examination to be given, together with the fee which is five dollars. It has also prepared instructions on how to use the periodic health examination form developed by the Committee, and two pamphlets, one entitled "Notes on the Periodic Health Examination for Physicians," the other "Protect Your Health," for distribution to the laity. All of this material, together with a letter requesting those who will make periodic health examinations to notify the Society's office, has gone forward to the membership.

These, of course, are only the preliminary steps and must be followed by vigorous efforts if this project is to be firmly established. The Committee is considering demonstrations of how to use the periodic health examination form, to be held in the Society's building and in connection with hospital staff meetings. It is also going to urge that physicians have themselves periodically examined. This is desirable both from the standpoint of the physicians' health and its effect upon the public. Then, of course, the active interest of the public must be stimulated and this can be done only if the coöperation of volunteer and public health agencies, civic groups and other organizations in the District is obtained.

In the past, medical organizations have succeeded in interesting only a very small portion of the public in periodic health examinations. However, the people of this country are rapidly becoming conscious that many diseases can be prevented. There can be no mistaking the trend. Preventive medicine is on the march. Unless physicians become more acutely aware of this fact than they are at present, an ever widening field of practice will be lost to them. Fortunately, there are signs that larger numbers of the profession recognize that they are witnessing a period of transition in medical practice and propose to take advantage of the opportunity at hand.

PERTINENT PARAGRAPHS

December Meetings

As usual during the holidays, meetings were fewer. There have, however, been meetings of boards and committees which had important work to do. Not only is the defense program demanding more attention, but agencies of the Society which operate continuously need supervision.

The following meetings were held in December:

December 2	Board of Censors Special Committee on 1710 M Street
December 4	Subcommittee on Tuberculosis
December 9	Committee on Industrial Medicine
December 10	Scientific Meeting of Society Subcommittee on Child Welfare
December 12	Committee on Public Policy
December 15	Committee on Relations with the Pharmaceutical, Dental and Nursing Professions
December 17	Scientific Meeting of Society Committee on Blood Donor Registry
December 22	Executive Board
December 29	Committee on Relations with the Pharmaceutical, Dental and Nursing Professions

Faith in the Doctor

Writing in the December issue of the *Mahoning County Medical Society Bulletin*, the Rev. Roland A. Luhman of the First Reformed Church, Youngstown, Ohio, observes:

"It is hardly necessary to speak to a patient about faith in God when it is obvious that he is wavering in faith in his physician or in his nurse. Speaking for myself alone, I always begin with what is at hand.

" 'And who is your doctor?' This is generally one of the first queries asked of a patient or of a member of the patient's family. If I know the physician personally, and I do know a great number of them in this city, I always speak of some great service he has performed for some one in the past. His ability is mentioned. His thoughtfulness and his devotion to the patient is brought out. If it happens that the doctor in charge is unknown to me, still is he recommended. For it is my conviction that one practicing medicine and a recognized member of the medical fraternity must have about him some qualities of usefulness. Furthermore, if nurses are employed, a kind word is always spoken in their behalf. Yes, it is necessary for me to begin with what is at hand in order that confidence and faith may be firmly established in the persons into whose hands the patient has entrusted himself.

"So with confidence in man established, one can then proceed to 'build the soul,' as it were. . . ."

"Of course, the methods employed by the cleric to accomplish these ends differ in every case. I speak only for myself. In but a limited number of cases do I offer what is generally referred to as a 'formal' prayer. Prayer is after all the heart's desire either expressed formally or expressed informally through encouragement. I feel that when I have succeeded in awakening within the patient through my sincere interest in him a desire to coöperate with his physician and his nurse and have aroused a willingness on the part of the patient to let loose the 'haunting ghosts' that make him afraid, and have further excited a will to live on the part of the patient, that I have at least partially settled his body, heart and mind. In fact the prayer of the heart is answered even before it is uttered."

The clergy and the medical profession have much in common where the afflictions of mankind are concerned. They can and should supplement each other's efforts.

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An Examining Physician's View of Selective Service

Examining physicians for local draft boards will find the following excerpt from an article by Dr. Gerald S. Backenstoe, which appeared in the November issue of the *Pennsylvania Medical Journal*, of particular interest. Dr. Backenstoe says:

"In retrospect, it does seem as if the Selective Service Act, from the medical examiner's viewpoint, rolled into action with less clank of metal, less stripping of gears, and more smoothness in general than any comparable mobilization of the nation's human resources. In between the emergency fractured skull, the case of placenta praevia, and the appendectomy, the busy practitioner attempted to examine his bimonthly quota of selectees. The calls for men, at first moderate in number, had to be met, and happy was the examiner when he found enough 1-A's, even though it seemed necessary at times to stretch the regulations a trifle. On several days, often consecutively, selectee after selectee was examined with results increasingly foreboding as IV-F's and 1-B's went marching by, and the clerk of the local board called repeatedly warning that the 1-A's must be notified 10 days in advance of induction day, and 'we need 8 more by next Saturday.' The picture is clear enough to everyone; you can even hear the ringing phone, the crying infant, and therefore understand the reason for the rejections by the mechanized army induction boards who worked free of such endless distraction."

Dr. Backenstoe then describes some experiences in his county. He closes his article with the following enlightening observations:

"In July of this year, the Allentown (Pa.) Bureau of Health issued an especially interesting bulletin analyzing the defects found on medical examination of Allentown's school children during the years 1940–1941. The same defects were found in almost exactly the same proportion in the school children as they were found in the selectees. The 45 examiners of the Lehigh County Medical Society agreed with the statement of the secretary of that society when he discussed these defects: 'Faulty nutrition, of course, is a large factor, but the greatest factors causing defects in any series such as this are parental neglect and carelessness.' The examiners knew these men in many cases, they knew these children and their parents as well, and the truth was plain. America's most vital first line of defense—its health—was impaired by the carelessness and the neglect of the people themselves. The draft board physician saw quite clearly that in spite of the immense efforts of the A.M.A. and its members to instruct, to inform, to warn, and to advise in every possible way, the people in many cases prefer the luxuries, the cakes, and the beer of life to the health of their children.

"In conclusion, a survey of the opinions of the Lehigh County examiners discloses the following:

1. Unanimous satisfaction with and respect for the management of the Selective Service Act by the headquarters office in Harrisburg.
2. Complete agreement on the value of the new Pennsylvania plan now in operation, with the suggestion perhaps that consideration be given to a three to six month probationary period prior to final induction in an effort to save some of the great expense incurred caring for unfit accepted soldiers.
3. Medical group examinations are superior to the individual examiner's efforts.
4. Although there are occasionally inconsistencies in rejections for flat feet, tachycardia, functional heart murmurs, etc., our groups accept the rejections as final and attempt to learn from them.
5. The public at large does not realize that the doctors on Selective Service boards donate their time, effort, and earning power, and receive no fees for their services. This should be corrected.

6. Nearly three-fourths of Selective Service rejections form a group in which medical treatment could have or would have had little effect on the physical condition of these men.

7. The Lehigh County Medical Society stands ready to assume responsibility for its share of any national health program.

8. Selective Service work for many of us has been an education, a revelation, and a challenge.

9. And, finally, we believe that the doctors of our nation are rendering the utmost of medical service to the government in behalf of the National Defense Program with no quibbling, with no *strikes*, and with little concern as to whether or not our profession is contributing more than its just share."

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14th Annual Scientific Assembly

The General Chairman of the Committee on Arrangements for the 14th ANNUAL SCIENTIFIC ASSEMBLY of the Medical Society of the District of Columbia announces that the ASSEMBLY will be held at the Mayflower Hotel, Washington, on September 29, 30, and October 1, 1942. Subcommittees in charge of various aspects of the ASSEMBLY will soon become active. Consideration is being given to an art and historical exhibit to replace the Hobby Show and the Military Exhibit which have been on display the previous two years.

Despite the uncertainty of the future due to the war, unless the situation becomes very acute, it is expected that the coming ASSEMBLY will be the most successful yet undertaken. Certainly there will be more physicians in or near Washington than in the history of the ASSEMBLY.

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Rehabilitation Study Completed

The Society's Committee on Military Affairs submitted its report on "A Cost Study Project for Rehabilitation of Selective Service Registrants in the District of Columbia" to the State Medical Officer of Selective Service in the District on December 8. The study was a joint effort of the Committees on Military Affairs of the Medical Society of the District of Columbia and the District of Columbia Dental Society, the American Red Cross, the Health Security Administration and the Medico-Chirurgical Society, Inc., of Washington. As soon as permission has been given by National Headquarters of the Selective Service System, the report will be published in the MEDICAL ANNALS. It can be said that the Society and coöperating agencies have been informed that the study is the most complete and satisfactory one of its kind that has been made.

It is now certain that the rehabilitation program will become a reality. The Executive Order issued by President Roosevelt on December 12 states that the Director of Selective Service "is hereby authorized to plan, establish, and carry on a program having as its purpose the physical rehabilitation of registrants for training and service in the armed forces of the United States.

"In order to carry out this purpose, the Director of Selective Service is hereby further authorized:

(1) To prescribe such rules and regulations, including changes and amendments to Selective Service Regulations, as he shall deem necessary.

(2) To issue such public notices, orders, and instructions as he shall deem necessary.

(3) To obligate such funds as may be specifically appropriated or allocated for this purpose and funds appropriated generally for the operation and maintenance of the Selective Service System.

(4) To perform, delegate, or provide for delegation of any duties, functions, and powers necessary in carrying out the purposes of this order to such officers, agents, or persons as he may designate, and in this connection to utilize so far as may be practicable any available Federal facilities."

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"Magnets of Potential Danger."

The editor of the *Journal of the Medical Society of New Jersey*, in the November issue, warns of the danger of attack on the Atlantic seaboard. "Doctors," he says, "above all others, know how wise it is to prepare for the worst while still hoping for the best. New Jersey is uncomfortably, but not unreasonably conscious, of what that 'worst' might mean in the event of any increasing acuity of the national emergency. Our state's vulnerability arises from the fact that it is the bridgeway between the country's metropolis and the nation's capital; that it is the home of several strategic airports; that it contains in its southern portion an agricultural area that must serve as part of the breadbasket of the East; while its northern district teems with industrial concentrations. New Jersey is proud of the shipyards, docks, airports, factories, and forts which it houses. But there is no blinking at the fact that these very facilities are magnets of potential danger to our citizenry.

"In any disaster, the medical profession will have a man-sized job. Let the job be uncomplicated by diversion of our time and energy into functions for which we are not especially trained or into duties already assigned to others."

ENROLLMENT FORM FOR PROCUREMENT AND ASSIGNMENT SERVICE FOR PHYSICIANS

Dr. Sam F. Seeley, Executive Officer
Procurement and Assignment Service
New Social Security Building
4th and C Streets, S.W.
Washington, D. C.

Dear Doctor Seeley:

Please enroll my name as a physician ready to give service in the Army or Navy of the United States when needed in the current emergency. I will apply to the Corps Area commander in my area when notified by your office of the desirability of such application.

Signed..

1. Give your name in full, including your full middle name:
2. The date of your birth:
3. The place of your birth:
4. Are you married or single?
5. Have you any children? If so, how many?
6. Do you believe yourself to be physically fit and able to meet the physical standards for the Army and Navy Medical Corps?
7. Have you filled out previously the questionnaire sent to all physicians by the American Medical Association?
8. When and where were you graduated in medicine?
9. In what state are you licensed to practice?
10. Do you now hold any position which might be considered essential to the maintenance of the civilian medical needs of your community? If so, state these appointments:

11. Have you previously applied for entry into the Army or Navy Medical Service? If so, state when, where and with what result (if rejected, state why).

Signature..

Date.. Address ....

President's Page

AN ALL-OUT EFFORT

The public is being subjected to a barrage of pleas for support of this campaign or that Government project. This is to be expected in wartime and it is to be hoped that there will be prompt and enthusiastic response, for we must all do our part. But in doing so, we should not lose sight of the fact that an equally important duty to our country is to live as normally as possible. Worthwhile peacetime institutions must be kept alive and healthy so that when the conflict is over we will not have lost contact with those things which give our existence meaning.

In this connection, I want to remind our members how important it is in this crisis that they actively support their Medical Society. And this does not mean financially alone, for personal interest is of equal importance.

The Society is carrying a heavier burden than it has in its history. Your officers feel deeply their responsibilities and are not unprepared for the difficulties which undoubtedly lie ahead. They recognize that in these times the greatest danger to our organization is apathy. If a majority of physicians who constitute the Society will take the trouble to learn what their organization is doing and express their wishes, there will be no need for concern.

My plea to our members at the beginning of this year is, let us maintain our Society at full strength during these difficult days, that it may fulfill its obligations to the public and the profession.

Henry R. Schreiber

Medical Preparedness Section

EMERGENCY MEDICAL SERVICE IN OPERATION

John A. Reed, M.D.

Chief Medical Officer, Emergency Medical Service for Civilian Defense in the District of Columbia

By order of the President of the United States, the Office of Civilian Defense was established for the purpose of developing means of protecting the civilian population in time of emergency. The work of this wartime agency is divided into five main divisions: police, fire, public works, air raid and medical units.

Though a military attack on Washington is believed by many to be in the realm of fantasy, and the thought that the Nation's Capital may be the London or Coventry of the Western Hemisphere is decidedly improbable, I am sure that we are all agreed that to let it rest at that would be folly. Complacency in the present situation and a community feeling that "it can't happen here" might well prove as disastrous in America as in other countries.

It is not with the idea of arousing fear in the minds of the people that federal, state and local governments are busy with civilian defense measures, but rather to be prepared for all emergencies. I am sure that even if the program for civilian defense should be abandoned without ever having been put to the use for which it was intended, the experience of having created the organization and developed a sense of responsibility in the participants would have been well worthwhile. The program affords a place for every one in the community to aid in the preservation of our home front.

Physicians of Washington have a definite and important part to play in civilian defense and I am sure that they will, as they always have, give their services unhesitatingly and unmindful of personal sacrifices. Under the local U. S. Coördinator for Civilian Defense, the Honorable John Russell Young, Commissioner of the District of Columbia, the Emergency Medical Service for Civilian Defense has been established. The function of the Service is to provide medical care to the sick and injured in times of emergency.

Emergency Medical Field Units

The basic unit of Emergency Medical Service is known as the Emergency Medical Field Unit. Every hospital in the city of Washington has been called upon to organize such units and assemble the necessary equipment. A unit is divided into squads, two or more, depending upon the size of the hospital in terms of maximum bed capacity. One physician has been selected to command the entire unit, and squad leaders designated. Each squad has been again divided into teams. A team consists of one physician, one nurse, and one nurse's aide. A team then is the advance first aid unit nearest the field of emergency.

Personnel of Emergency Medical Field Units have been selected from resident, attending and visiting staffs of each hospital.

The Role of the Hospital

Each hospital in the city will have three functions. It will organize its Emergency Medical Field Units; it will dispatch to the field of emergency squads or teams of its Field Units; and finally, it will be a receiving institution for casualties from the field of emergency.

I would like to say at this point that the hospitals of Washington are coöperating splendidly. Officials of one hospital have been so interested in aiding the civilian defense program that they have called me at frequent intervals asking for instructions before the Emergency Medical Service had been properly organized.

CASUALTY STATIONS AND FIRST AID POSTS

Between the field of emergency and the receiving hospital there will be established two relay stations; first, casualty stations will be situated at predetermined locations over the entire city, according to population areas. Locations will be selected on the basis of shelter and accessibility. At these stations, assistance to the injured will be limited to emergency first aid procedures—relief of pain, prevention of shock, control of hemorrhage, care of burns, application of splints and surgical dressings, and not least, the preservation of morale. The seriously injured will be evacuated as rapidly as possible by ambulance or other vehicle to hospitals. Buildings which have been selected as casualty stations include schools, churches, already established private and government dispensaries and health clinics, and police and fire stations.

The second relay station is designated the first aid post. The squad leader in charge of a casualty station may see fit to split off one or more teams, dispatching them to points near the field of catastrophe. The injured received at the first aid post will be given only the most urgent first aid and taken as promptly as possible to the nearest casualty station, or if necessary, to a hospital.

Rescue squads and stretcher teams from the regular and auxiliary police, fire and other municipal departments will convey casualties on foot or by means of stretchers to first aid posts and casualty stations.

ORGANIZATION OF EMERGENCY MEDICAL SERVICE

As in every large undertaking, in order that the Emergency Medical Service should function smoothly, it was necessary to develop a sound organization. It was therefore decided that responsibility for various aspects of the program should be assigned to different physicians. A special assistant and ten assistant medical officers were appointed, each being assigned a specific duty. Mr. Theodore Wiprud, Secretary of the Medical Society of the District of Columbia, was appointed Special Assistant and Liaison Officer to the medical profession. The following Assistant Chief Medical Officers were appointed:

Dr. Oscar B. Hunter, Assistant Chief Medical Officer in Charge of Personnel

Dr. W. Ross Morris, Assistant Chief Medical Officer in Charge of Casualty Stations

Dr. William Earl Clark, Assistant Chief Medical Officer in Charge of Volunteer Agencies

Dr. Philip O. Pelland, Assistant Chief Medical Officer in Charge of Transportation

Mr. O. K. Fike, Assistant Chief Medical Officer in Charge of Hospital Mobilization

Dr. Paul F. Dickens, Assistant Chief Medical Officer in Charge of Government Agencies

Dr. James A. O'Keeffe, Assistant Chief Medical Officer—Organization Assistant

Dr. Philip T. Johnson (Medico-Chirurgical Society, Inc., of Washington), Assistant Chief Medical Officer—Organization Assistant

Dr. William B. King, Assistant Chief Medical Officer—Organization Assistant in Charge of Metropolitan Area of Virginia

Dr. Read N. Calvert, Assistant Chief Medical Officer—Organization Assistant in Charge of Metropolitan Area of Maryland

Each Assistant Chief Medical Officer is now completing organization of his unit.

MEDICAL ADVISORY COUNCIL

In accordance with requirements promulgated by the United States Office of Civilian Defense, a Medical Advisory Council to the Chief Medical Officer of Emergency Medical Service has been appointed. The Chief Medical Officer is Chairman of the Council. Members are: Dr. George C. Ruhland, District Health Officer; Dr. Charles Stanley White, Dr. James Alexander Lyon and Mr. Theodore Wiprud, representing the Medical Society of the District of Columbia; Miss Edith M. Beattie, Executive Secretary of the Graduate Nurses' Association of the District of Columbia; Mrs. Louisa S. Roberts, Executive Secretary of the Council of Social Agencies of the District of Columbia and Vicinity; Mr. B. B. Sandidge, Hospital Administrator; and Dr. Roy Lyman Sexton, representing the American Red Cross.

The Council, as its name implies, acts in an advisory capacity to the Chief Medical Officer of Emergency Medical Service.

PROGRESS TO DATE

At the present writing, Emergency Medical Field Units comprising thirty-five squads have been organized in the various hospitals. Fifty squads will be the maximum number necessary. It is estimated that this number will care for a population of one million, which exceeds the present population of the metropolitan area of Washington.

As previously stated, sites for the establishment of casualty stations over the entire city have been chosen and the nearest routes and alternate routes to hospitals are being mapped. Organization of all necessary volunteer agencies is well under way and already large groups have offered their services. The Red Cross is training hundreds of nurses' aides and first aid workers for field units. All local and federal agencies whose assistance will be needed have been contacted and the response is gratifying. The District of Columbia Pharmaceutical Association, under the leadership of Dean W. Paul Briggs and Mr. Irving A. Tennyson, President of the Association, has submitted a plan whereby pharmacists may well fit into the Emergency Medical Service.

Under the direction of Dr. Oscar B. Hunter, Assistant Chief Medical Officer in Charge of Personnel, every physician in the city will be assigned a task and place in the time of emergency. The coöperation of every physician in the metropolitan area of the city of Washington will be needed.

WOMAN'S AUXILIARY NOTES

The last meeting of the Woman's Auxiliary to the Medical Society of the District of Columbia was held on Wednesday, December 10, 1941. Members brought Christmas toys to add to those purchased by the Auxiliary for filling stockings for the Washington Heart Association. The speaker was Dr. John A. Reed, Chief Medical Officer, Emergency Medical Services for Civilian Defense.

Dr. Reed discussed briefly the function and set-up of the Emergency Medical Service for Civilian Defense. In view of the grave occurrences the few days preceding the meeting, no subject could have been more appropriate. The keynote of the program is preparedness. About two thousand people are required to carry on this work, which is now about 50 per cent organized. And where do we as doctors' wives fit into this picture? Dr. Reed quite correctly suggests that our principal duty is to look after our husbands, who are facing increased burdens of work and longer hours of service. By keeping them in condition, that they may serve others, we will be doing our first, most important duty.

Mrs. E. Leonard Goodman
Publicity Chairman

MEETINGS

Wednesday, February 11

Military Medicine

"From Civilian Practice to Military Service." Lt. Col. Daniel L. Borden, M.C., U.S.A., Chief Surgeon, Station Hospital 1322d Service Unit, Fort George G. Meade, Maryland; Associate Professor of Surgery, George Washington University School of Medicine

"Parachute Injuries," illustrated with motion pictures of jumping. W. J. Tobin, M.D.

Monday, February 16

Section on Gastroenterology

"Gall Bladder Disease—Its Clinical Considerations." Ernest H. Gaither, M.D., Baltimore, Past President, American Gastroenterological Association

Wednesday, February 18

The Washington Urological Society will present the following program:

"The Value of Cystometry in the Everyday Practice of Surgery and Medicine." Reed N. Nesbit, M.D., F.A.C.S., Associate Professor of Surgery, University of Michigan Medical School

Wednesday, February 25

"Ovarian Deficiencies and Their Treatment." Fuller Albright, M.D., Assistant Professor of Medicine, Harvard Medical School

Buffet Supper

MEMBERSHIP

The following applicants for membership were duly elected to membership at the business session, December 10, 1941:

Active Members

William K. Billingsley, Jr., Mayflower Hotel
Alfred A. J. Den, Garfield Memorial Hospital
Arthur Dick, 719 Princeton Place, N. W.
Julius Robert Epstein, 4608 Fort Totten Drive, N. E.
Leon Gerber, 900 17th Street, N. W.
Robert H. Groh, 1028 Connecticut Ave., N. W.
Harold L. Heiges, 6940 Piney Branch Road, N. W.
Donald H. Leeper, Jr., 1835 Eye Street, N. W.
Thomas F. Quinn, 2222 Eye Street, N. W.
Hilbert S. Sabin, 1835 Eye Street, N. W.

George J. Stuart, 1150 Connecticut Avenue, N. W.
William J. Tobin, 1835 Eye Street, N. W.
Alfred Wilson, 1418 Good Hope Road, S. E.
Irving W. Winik, 1800 Eye Street, N. W.

Associate Members

Samuel M. Novak, 101 N. Columbus Street, Alexandria, Va.
Albert J. Orlosky, 1800 Key Boulevard, Arlington, Va.
Philip H. Varner, Sibley Memorial Hospital

The following applicants for membership will be voted on at the business session, February 11, 1942:

For Active Membership

James L. Mims, Medical College of the State of South Carolina —1935
Marshall de Graffenried Ruffin, Harvard Medical School— 1936

For Associate Membership

Ralph G. Beachley, George Washington University—1920

The following applicants for membership will be voted on at the business meeting, March 4, 1942:

For Active Membership

Carl Berg, Tufts Medical School—1931
William D. Claudy, George Washington University—1938
William J. Collins, Georgetown University—1940
George R. Farrell, George Washington University—1937
Max C. Miller, Temple University—1938
S. Arthur Linde, University of Maryland—1925
Bertram F. Schaefer, Georgetown University—1935

For Associate Membership

Eugenia E. Murphy, University of Wisconsin—1936

Recent changes in membership status:

Resigned:
Active Members
O. Anderson Engh
Louis S. London

NEWS AND PERSONALS

George Washington University School of Medicine is offering its **Sixth Annual Postgraduate Course in Ophthalmology,** February 2–4, 1942, to be followed directly by an **Intensive Postgraduate Course in Aviation Ophthalmology and Aviation Medicine,** February 5–7. The fee for each course is $35.00, $15.00 payable with registration and the remainder payable on matriculation. Registration for both courses can be made at the same time, Monday, February 2, 8:00 to 8:45 a.m. Both courses will be held at the School of Medicine, 1335 H Street, N.W., opening promptly at 9:00 a.m. Guest speakers are as follows:

Dr. William L. Benedict, Rochester, Minn.; Dr. Edwin B. Dunphy, Boston; Dr. Harry S. Gradle, Chicago; Dr. Walter I. Lillie, Philadelphia; Dr. S. Hanford McKee, Montreal; Dr. Avery DeHart Prangen, Rochester, Minn.; Dr. Algernon B. Reese, New York City; Dr. Meyer Wiener, St. Louis, Mo.; Dr. Horace E. Allen, Columbia, Mo.; Debora Dicke, Milwaukee, Wis.; Elizabeth K. Stark, New York City; Lt. Col. Frederic H. Thorne, Fort Sam Houston, Texas; Major M. S. White, Randolph Field, Texas; Col. A. D. Tuttle, Randolph Field, Texas; Dr. Hodges McKnight, Fort Worth, Texas; Col. J. E. Ash, Dr. Sterling Bockoven, Dr. Everett S. Caldemeyer, Dr. Frank D. Costenbader, Dr. H. R. Downey, Lt. Alfred Golden, Dr. Richard W. Wilkinson, Lt. Col. David N. W. Grant, Major John M. Hargreaves, Capt. J. C. Adams, Comdr. Eric Liljencrantz, Lt. Comdr. Leon Carson, Dr. W. Randolph Lovelace, Dr. Ross A. McFarland, Dorothy R. Bair, Helenor Campbell Wilder and Lawrence P. Ambrogi, Washington.

A Practical Course in Ocular Surgery, Pathology and Orthoptics, limited to thirty participants, will be held January 26–31, 1942. The fee for this course is $100.00, $25.00 payable with registration, the remainder of the fee payable on matriculation. Applicants may register for this course on Monday, January 26, from 7:30 to 8:30 a.m., at the School of Medicine. Any further information may be secured from Dr. William Thornwall Davis, 927 17th Street, N.W.

The American Association of Obstetricians, Gynecologists and Abdominal Surgeons Foundation, Inc., has forwarded the rules governing the award of its annual "Foundation Prize," which consists of $150. Eligible contestants shall include only (a) interns, residents, or graduate students in obstetrics, gynecology or abdominal surgery, and (b) physicians who are actively practicing or teaching obstetrics, gynecology or abdominal surgery. Manuscripts must be limited to 5,000 words, typewritten and double spaced on one side of the sheet, and presented under a nom de plume. All manuscripts and illustrations must be in the hands of the Secretary, Dr. James R. Bloss, 418 11th Street, Huntington, West Virginia, before June 1.

The Mississippi Valley Medical Society offers annually a cash prize of $100, a gold medal, and a certificate of award for the best unpublished essay on any subject of general medical interest (including medical economics) and practical value to the general practitioner of medicine. Contestants must be members of the American Medical Association who are residents of the United States. Contributions shall not exceed 5,000 words, be typewritten in English in manuscript form, submitted in five copies, and must be received not later than May 1, 1942. Further details may be secured from Dr. Harold Swanberg, Secretary, Mississippi Valley Medical Society, 209–224 W. C. U. Building, Quincy, Ill.

The Washington Ophthalmological Society will meet February 2 in the auditorium of the Medical Society. Registrants for the George Washington University postgraduate courses in ophthalmology are cordially invited to attend. The following program will be presented: "The Routine Examination of the Fundus in Diabetes," Dr. S. Hanford McKee, Montreal, Canada; "Exophthalmos Associated with Thyroid Disease," Dr. Algernon B. Reese, New York City; "Reflections on Glaucoma Surgery, after Forty Years' Experience," Dr. Meyer Wiener, St. Louis, Mo.

The Section on Pediatrics of the Medical Society wishes to call to the attention of Washington physicians the services which the **Children's Country Home** is rendering to underprivileged sick children. Children from three months to six years of age convalescing from acute illnesses are eligible for admission. Any physician may recommend a child for admission to the Home, but because of the limited space available, and the necessity for a careful physical examination and social history of every child admitted, such recommendations must be approved by the Home through its physicians either at Children's Hospital or Gallinger Hospital. The Home has its own medical social worker, thus facilitating the task of getting a suitable environment for the child following convalescence. The Section hopes that more physicians will realize the value of the Children's Country Home, and make use of its many services to children.

The Clinico-Pathological Society met December 2 at the home of Dr. Homer G. Fuller. Case reports were presented as follows: "Heart Failure Precipitated by Marked Hyperthyroidism Due to Substernal Thyroid," Dr. B. W. Leonard; "Diaphragmatic Hernia," Dr. John Minor; "Case of Fractured Pelvis in Industry," Dr. John A. Talbot.

The January meeting was held at the home of Dr. B. W. Leonard. The following case reports were presented: "Osteogenic Sarcoma," Dr. Arthur C. Christie; "Subglottic Hematoma," Dr. D. B. Moffett; "Chronic Amebiasis, Rheumatoid Arthritis," Dr. Matthew White Perry.

The Section on Ophthalmology and Otolaryngology met at the Cosmos Club, January 16. Dr. William F. Whalen of Philadelphia addressed the Section on the subject, "Orbital Complications of Paranasal Sinus Disease."

The Section on Neurology and Psychiatry held its regular meeting, January 8 in the Medical Society's building. The following program was presented: "Serial Thorium Studies of Irradiated Brain Cyst," Dr. H. H. Schoenfeld; "Psychotic Visitors at Government Offices," Dr. Jay L. Hoffman.

Another **Smith-Reed-Russell Lecture** was given on December 11 at the George Washington University School of Medicine. Dr. W. Harvey Perkins, Dean of the Jefferson Medical College, was the guest speaker. The subject of his address was "Causology and Its Application to the Prevention of Disease."

The Sixth National Social Hygiene Day will be observed on Wednesday, February 4. The theme for this year's observance will be "Keep America Strong, Help Build Better Health." Special attention will be directed this year toward the full realization of the menace of organized prostitution in areas adjacent to concentrations of armed forces and in industrial centers. Dr. Ray Lyman Wilbur, President of the American Social Hygiene Association, urges nationwide participation in Social Hygiene Day. Detailed information on effective coöperation may be secured by writing to the American Social Hygiene Association, 1790 Broadway, New York City.

Brig. Gen. Lewis B. Hershey, Director of Selective Service, advises that third and fourth year students in acceptable medical schools and first year interns may obtain reserve commissions in the Army or Navy and then will be permitted to complete their medical training, including one year of internship before being ordered to active duty. Medical students and interns accepted by the Army are given commissions as second lieutenants pending graduation, when they become first lieutenants in the Army Medical Reserve Corps. Those accepted by the Navy are commissioned as ensigns until graduation, when they become lieutenants (junior grade) in the Navy Medical Reserve Corps.

The Medical and Surgical Staff of the Episcopal Eye, Ear and Throat Hospital has elected the following officers for this year:

Dr. Claude Moore, *Chairman;* Dr. Frazier Williams, *Vice Chairman;* Dr. B. J. Gurwin, *Secretary.*

Dr. Dexter M. Bullard, Chief Medical Officer of Civilian Defense in Montgomery County, held a meeting of all county physicians and nurses, December 23, to discuss plans for emergency medical services.

Dr. John A. Reed, Chief of Emergency Medical Services for Civilian Defense in the District of Columbia, addressed the graduate nurses of the District and nearby Maryland and Virginia at the Commerce Department auditorium, December 15. The meeting was sponsored by the Graduate Nurses' Association.

Dr. George W. Creswell has received an appointment as special consultant in the Public Health Service, Division of Venereal Diseases.

Dr. George C. Ruhland was one of the guest speakers at a dinner meeting of the Washington Reciprocity Club, December 11. His talk concerned the work accomplished by the Club, which donates eyeglasses to indigent school children.

Dr. Winfred Overholser addressed the monthly dinner meeting of the Altrusa Club, December 10.

Dr. Charles Stanley White has been appointed to serve on the **Executive Committee of the State Rationing Board** for the District of Columbia. **Dr. John F. Preston** has been appointed a member of Tire Rationing Board No. 1.

RED CROSS WAR FUND

Mr. Bruce Baird, General Chairman of the campaign to secure a Red Cross War Fund for our armed forces and civilians, has announced the appointment of Dr. John Hugh Lyons as Chairman of the Doctors' Division of the Professional Group for the District of Columbia Chapter. Dr. Edwin S. Jones has been named Chairman of the Colored Doctors' Division.

Dr. Lyons has issued the following statement for the attention of Washington physicians:

"The President of the United States in a recent proclamation calls upon the citizens of this Nation to contribute $50,000,000 to the Red Cross for War Relief. The District of Columbia Chapter has been asked to raise $750,000 of this fund. This is a challenge to us, and we should accept it without fail.

"Each of our professions is called upon to contribute to the work of the Red Cross. The Medical Society forms a part of the Professional Group. Let us not be unmindful of the fact, when we are called upon to contribute to this worthy cause, that our soldier boys, as well as girls who have nursed or have been called as nurses, are giving much more: They are giving life itself, the most precious thing in the world. If we could give all of our substance we would not be equaling their sacrifice. Can we count on members of our Society to contribute generously to this fund? I believe we can, and I am relying on you."

Send your checks and money to the Headquarters of the War Fund Campaign, 2020 Massachusetts Avenue, and identify your remittances in such a way that they may be credited to the Doctors' Division of the Professional Group.

BOOKS RECEIVED FOR REVIEW

Acknowledgment is made of the following books which have recently been received for review:

Psychosurgery. Walter Freeman, M.D., Ph.D., F.A.C.P., Professor of Neurology, George Washington University, and James W. Watts, B.S., M.D., F.A.C.S., Associate Clinical Professor of Neurosurgery, George Washington University. Pp. 337. Price, cloth, $6.00. Springfield, Ill.: Thomas, 1942.

Shock Treatment in Psychiatry: A Manual. Lucie Jessner, M.D., Ph.D., Resident Psychiatrist, Baldpate, Georgetown, Mass.; Graduate Assistant in Psychiatry, Massachusetts General Hospital; Assistant in Psychiatry, Beth Israel Hospital, Boston; and V. Gerard Ryan, M.D., Associate Psychiatrist, Elmcrest Manor, Portland, Conn.; Assistant in Psychiatry, Harvard Medical School. Pp. 149. New York: Grune & Stratton, 1941.

Treatment of Infantile Paralysis in the Acute Stage. Elizabeth Kenny. Pp. 285, with 63 illustrations. Price, cloth, $3.50. St. Paul, Minn.: Bruce Pub. Co., 1941.

Diseases of the Blood and Atlas of Hematology, 2nd ed. Roy R. Kracke, M.D., Professor of Bacteriology, Pathology and Laboratory Diagnosis, Emory University School of Medicine; Pathologist to the Emory University Hospital; Consultant in Hematology to the Grady Hospital and Eggleston Hospital for Children, Atlanta, Ga.; formerly, Director of the Hematological Registry, American Society of Clinical Pathologists. Pp. 680. Price, cloth, $15.00. Philadelphia: Lippincott, 1941.

Radiations and Waves; Sources of Our Life. Georges Lakhovsky. Pp. 139. Price, paper, $2.50. New York: Emile L. Cabella, 228 East 45th St., 1941.

Encephalitis. A Clinical Study. Josephine B. Neal, A.B., M.D., Sc.D., F.A.C.P., Associate Director, Bureau of Laboratories, Department of Health, New York; Clinical Professor of Neurology, College of Physicians and Surgeons, Columbia University. Pp. 563. New York: Grune & Stratton, 1942.

The March of Medicine. New York Academy of Medicine, Lectures to the Laity, 1941. Pp. 154. Price, cloth, $2.00. New York: Columbia Univ. Press, 1941.

Immunology, 2nd ed. Noble Pierce Sherwood, Ph.D., M.D., F.A.C.P., Professor of Bacteriology, University of Kansas, and Pathologist to the Lawrence Memorial Hospital, Lawrence, Kansas. Pp. 593. Price, cloth, $6.50. St. Louis: Mosby, 1941.

Nutritional Deficiencies. John B. Youmans, M.D., Associate Professor of Medicine and Director Postgraduate Instruction, Vanderbilt University Medical School, Nashville, Tenn. Pp. 385. Price, cloth, $5.00. Philadelphia: Lippincott, 1941.

BOOK REVIEW

Treatment of Infantile Paralysis in the Acute Stage. Elizabeth Kenny. Pp. 285 with 63 illustrations. Price, cloth, $3.50. St. Paul, Minn.: Bruce Pub. Co., 1941.

Sister Elizabeth Kenny of Queensland, Australia is the authoress of this book which is intended to explain and support the "Kenny System" of treating poliomyelitis. One would expect that no one would be better able to accomplish this intention than the originator of the system. This is true in so far as an explanation of technic is concerned. However, when Sister Kenny attempts to give the rationale for her "System," one gains the impression that she might better have left this aspect of the writing to someone else.

Her treatment consists of applying heat to the spastic, antagonistic muscle group for relaxation; of early stimulation of the paralyzed muscle groups by massage; and of early passive and active reëducational exercises. She maintains that the virus has not destroyed the nerve cell, but merely interrupted its function. Therefore, if by muscle training exercises, the brain impulse can be directed through the non-functioning anterior horn cell and its axon, recovery of the muscle will be complete. While this theory is not in accord with pathologic studies, her treatment is good and has been and still is being used. Her contribution in treatment has been the combination of relaxation, reëducation, and protection very early in the course of the disease. The book is a discussion of methods and cases, and the impression is left with the reader that all her cases recovered completely. After thirty years of using this method in the treatment of infantile paralysis, Sister Kenny has completely omitted any statistics.

The book is written for the general public rather than for the medical profession. It is written with an antagonistic attitude toward the physicians and physiotherapists who have spent years in attempting to alleviate as much as possible the crippling deformities that so often follow anterior poliomyelitis. Not until one has read the last chapter of this book does one fully realize that Sister Kenny knows that the paralyzed muscles are flaccid while the antagonistic are spastic and that the relaxation treatment of these spastic antagonists and the prevention of overstretching of the flaccid muscles is the best method to prevent deformity. It is true that heat treatment of these spastic muscles is definitely indicated for relaxation and has been done in some places for some time. It is also true that children often forget how to use these momentarily paralyzed muscles when power does return. "It should be pointed out in this connection that there is no experimental evidence to support the contention that single muscle units might, as a result of appropriate manipulation, be encouraged to send their nerve fibers to muscle fibers which have been rendered atrophic by anterior horn cell degeneration." (J. A. M. A., 1941, **117**, 1980.)

No accurate estimates can be made of the value of Sister Kenny's treatment until we know exactly what percentage of recovery of individual muscles she gets. We have seen by accurate checking of the muscles a 95 per cent return of normal muscle function in one epidemic alone. Recovery depends on the amount of anterior horn cell damage, and no amount of physiotherapy will be able to restore normal muscle power when these nerve cells are destroyed. The purpose of any method of treatment is after all the preservation of the paralyzed muscle fibers in a healthy state. This healthy muscle will function only when the neural horn cells have recovered and nerve impulses can go out normally to every muscle fasciculus. The percentage of muscle function will be in direct proportion to the recovery of the anterior horn cells supplying the individual fasciculi in each muscle.

The style of the book is poorly organized for scientific purposes, and the length of the sentences makes reading difficult. There are numerous illustrations, some of which add to the value of the text. The printing is excellent.

M. C. C.

LOREN B. T. JOHNSON, M.D.
(1875–1941)

Dr. Loren Bascom Taber Johnson, psychiatrist, an Active Member of the Medical Society of the District of Columbia, died December 14, 1941, at Emergency Hospital, after a three weeks' illness. For the last three years, although he had retired from practice because of ill health, he took an active part in civic and medical affairs. At the time of his death he was Chairman of the Grievance Committee of the Medical Society. In this capacity he rendered outstanding service to the public and the profession. Courageous and just, he was highly regarded by his colleagues.

Dr. Johnson was born in Washington, D. C., June 15, 1875, and received his early education at Friends School, later attending Worcester Academy. He graduated from Georgetown University as a Doctor of Medicine in 1900, and began practice in 1901, specializing in psychiatric pediatrics. He was a psychiatrist for Children's and Garfield Hospitals, and was an Associate Professor of Psycho-Pediatrics at Georgetown University. He was a member of the District Board of Indeterminate Sentence and Parole from 1932 to 1934, and was head of St. Elizabeth's Hospital Modern Parole System.

LOREN B. T. JOHNSON, M.D.

During the Spanish-American War Dr. Johnson served as a volunteer midshipman. He later became a contract surgeon with the rank of First Lieutenant, and Captain in the United States Volunteer Medical Corps, serving in the Philippines. From 1914 to 1924 he was President of the Fairfax and Alexandria Building Association. Always interested in public health and welfare, he was President of the Washington Institute of Mental Hygiene, a member of the Executive Committee of the Community Chest, and a Board member of the Children's Protective Association.

Dr. Johnson became an Active Member of both the Medical Association of the District of Columbia and the Medical Society in 1902. He was a Fellow of the American Medical Association, former President of the Clinico-Pathological Society, as well as the Nervous and Mental Disease Association, a member of the American Psychoanalytic Association, and Phi Beta Pi Fraternity. He also held membership in the Chevy Chase, Cosmos, and Southwest Harbor (Me.) Country Clubs.

He is survived by his wife, Mrs. Catherine K. Johnson; a daughter, Mrs. David S. Barry, Jr.; a brother; Bascom Johnson, and four grandchildren. He made his home at 1900 24th Street, N. W.

CHARLES CLAGETT MARBURY, M.D., F.A.C.P.

(1870–1941)

Dr. Charles C. Marbury, a Life Member of the Medical Society of the District of Columbia, died December 10, 1941, at his home, 2202 Massachusetts Avenue, N.W., following a long illness.

Dr. Marbury was born at Mattaponi, near Nottingham, Maryland, in 1870; the son of Fendall, Sr., and Sarah Clagett Marbury. He received his A.B. degree from St. Johns College, Annapolis in 1890 and his degree in medicine from Georgetown University in 1893. For many years he was Professor of Clinical Medicine at Georgetown University School of Medicine. Until recently he was President of the Board of St. Johns College.

In 1895 Dr. Marbury became the first resident physician of Providence Hospital. He was connected with the Hospital for 40 years, 25 years in active service and 15 years as consultant. He was also a member of the Board of Directors and of the consulting staff of Emergency Hospital.

During the Spanish-American War Dr. Marbury served as a surgeon in the Army Medical Corps at San Diego. In the World War, with the rank of Major, he was one of the officers in charge of the base hospital at Brest, France. Following the Armistice he was made Lieutenant Colonel in the Medical Reserve Corps.

Dr. Marbury became an Active Member of the Medical Association of the District of Columbia in 1895 and of the Medical Society in 1896. Life Membership in the Society was conferred upon him January 1, 1936. He was a member of the American Medical Association and the American College of Physicians. He was also a member of the Southern Medical Association, the American Heart Association, the Clinico-Pathological Society, and the Metropolitan and Chevy Chase Clubs.

Surviving are two step-children, Mrs. J. J. Willard of Elmira, New York, and Arthur S. Messick of Chicago; a niece, Mrs. Henry C. B. Clagett of Upper Marlboro, Maryland; and two nephews, Dr. William Berry Marbury of Washington, and Judge Charles Clagett Marbury of Upper Marlboro. His wife, Mrs. Mary Stuart Marbury, died in 1940.

LOUISE TAYLER-JONES, M.D., F.A.C.P.

(1872–1941)

Dr. Louise Tayler-Jones, an Active Member of the Medical Society of the District of Columbia, died December 21, 1941, at her residence near McLean, Virginia.

Dr. Jones was born in Youngstown, Ohio, November 14, 1872. She received her Bachelor of Arts degree from Wellesley College in 1896, and Master of Science degree from Columbian University in 1898. She studied medicine at Johns Hopkins University, graduating in 1903. The same year she began the practice of medicine in the District of Columbia.

Dr. Jones became a member of the Medical Association of the District of Columbia in 1904, and of the Medical Society the same year. She was a Fellow of the American Medical Association and a Life Member of the American College of Physicians.

Her husband, Edward Barton Jones, an Active Member of the Medical Society for many years, preceded her in death in March, 1941.

(*Continued from page 15*)

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WHY ARE THERE SO MANY NEUROTICS?*

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THE title of this paper was given to me by the committee handling the program for these sessions. It arrived at my desk in writing, with no indications as to where the emphasis was to lie. A moment's thought will show that its verbalization may lead to two (at least) important and diverging interpretations. For example, "*Why* are there so many neurotics?" seems to call for a detached formal accounting in the best scientific tradition of a problem which has engrossed medical workers throughout the years. Whereas, "Why *are* there so *many neurotics?*" sounds like the despairing and agonized cry of the well trained specialist who has come to the end of a busy day and must honestly concede that his professional skill and special acumen have met repeated failure in the diagnosing and treatment of human ills. I feel sympathetically toward such a colleague. How trying it must be to be possessed of the most advanced and intricate knowledge of the X-ray appearance of the human interior, or to know the vitamin potencies, or to possess the most acute skill in the interpretation of heart action, or breath sounds—how trying, if all these skills applied to problems which at first blush seem to cry for their application only lead to the disappointing conclusion that things are not what they seem, and the patient is really only neurotic. The better the diagnostician, the greater is the effort which he comes to spend on problems which end only in negative answers. Since no one is ever completely satisfied with negative answers, they become magically transformed into a positive answer: The patient is neurotic.

The only real quarrel with such a diagnostic trick lies in its lack of utility for the patient's case. If this had led immediately to real understanding of what is wrong and what to do about it, there would have been no need for assigning me such a topic. Unfortunately, diagnosis arrived at by negative exclusion must remain a most inadequate basis for the construction of a positive therapeutic program. This can come about only through the discovery of positive factors which will be found explanatory for the difficulty.

A preliminary question must be answered before the title of this paper can be approached. What constitutes a neurosis of any sort and what do we actually know about its causes?

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* Read at the Thirteenth Annual Scientific Assembly of the Society, October 2, 1941.

I shall state our position briefly, for there are fewer facts than theories in this field. A neurosis constitutes a variety of life maladjustment, usually of a sort sparing the victim many of his assets for useful employment, and in which one may see operating a strange interplay of special and habitual personality traits and special life experiences which lead to the production of faulty attitudes and emotional expression. The resulting neurotic performance bears all the semblance of an effort to keep alive incompatible needs and desires by such dodges as not letting "the right hand know what the left hand is doing," or attempting "to eat one's cake and have it too." These all constitute efforts to avoid the mental pain which clear-cut decision would entail. How else may one explain the somatic complaints of the healthy young woman who at one and the same time wants to marry but doesn't want to for fear of cutting loose from mother's or father's protection. The neurosis is expressed in the special complaints which serve the function at one and the same time of expressing the appropriate emotion, and in diverting attention from the real trouble. The diagnostician's efforts serve the purpose of unmasking the presenting complaints as subterfuges for the real trouble. They fail in identifying the real trouble, for this task requires a different sort of technical tool.

As it turns out, this tool is the oldest one in use in medicine, but one which has suffered from neglect with the development of diagnostic short cuts of a laboratory or instrumental nature. It is nothing else than a critical appraisal of the historic development in longitudinal section of the patient's peculiar difficulty. There are no very dependable short cuts in such a process, although as in other branches of medicine search is constantly being made for them.

A proper survey will disclose the presence of life situations of a sort which defy easy solution and, the patient being what he is, lead to unpleasant emotional reactions. We are only at the very beginning of our knowledge about the visceral expression of emotional states, but our language is full of suggestive hints. A recent patient under treatment for mucous colitis, which for many years had bothered him in situations where he felt himself under unfavorable social scrutiny, commented that he had often had the suspicion that his colitis denoted really a "lack of guts" on his part. He unwittingly had turned to the inherent wisdom in our language to express a profound fear about himself—a fear which was more fully explored in subsequent contacts and largely disposed of.

It does not follow that every person with nonstructural mucous colitis is taking a roundabout method for expressing his lack of confidence in himself, but it was dramatically the case in this patient.

Another common example of neurotic blindness or duplicity is seen in the complaint of tiredness. How much technical skill, time and expense are necessary to prove that this tiredness bears no relation to any known pathogenic factors in metabolism, endocrine or vitamin balance, or infectious state! All this finally is seen to be the neurotic's way of hinting, but not actually admitting, that he is "tired of it all," bored, fed up, full of complexities and tired of attempting to achieve the unachievable. The strange thing lies in the fact that the patient only deceives himself. Less often is he successful in deceiving those who live with him. They soon learn that his symptoms not only harbor inner meanings but have a place in his economy, assisting him in bending the environment to his desires.

Children exhibit their desires in an amusingly glaring fashion. They endear themselves to us by their naïveté and their open sensitiveness to social approval or disapproval. But such frank exposure of one's needs, especially those conflicting with social custom, or smacking of the less worthy aims of life, are adjudged undesirable in the adult. The adult is expected to have reached a state in which he can control his desires to the point of making them conform to the currently accepted notions. But not everyone develops in such a desirable manner; or one may pay lip service only to convention while remaining true to the earlier (i.e., childish) ideals. There results a situation in which the patient is hard pressed by paradoxical forces, and the neurotic development represents the best effort to satisfy all the forces at work.

It was the merit of the Freudian school to point out the frequency of sexual disorders in the neurotic development. This is a fact, although not a "sine qua non," and when present it may be causative of the neurosis, a resultant of it, or only one bit of evidence, perhaps the most glaring bit, of the neurotic performance. This is a question to be decided on its own merits in each case, and in arriving at such a decision no doubt one's own training and proclivities will play a part. Actually that which appears as causative-sequential for one may appear as random to another. The diagnostic and therapeutic effort appears as an attempt to present the known material in as plausible a fashion as possible. Many people will get the greatest help from an account which simply juxtaposes events in what common observation regards as a reasonable relationship. Others will feel at ease only with some special formulation of the material. In this latter group I would place my psychoanalytic colleagues. In any case there appears no need for an error-proof logic, since in the therapeutic transfer of the insight into the material to the patient, transformations are bound to occur which may make a mockery of the original formulation, yet still be valid. I try with patients to remain on the basis of useful hypothesis, and put the hypothesis to test on every possible occasion, demonstrating a willingness to change my viewpoint and asking the same of them.

There appear to be numerous reasons for the prevalence of neurotic reactions. All these factors are not of the same degree of amenability. In most neurotic cases, a strong constitutional tendency can be demonstrated. It may be doubted that this is actually inherited, but the lifelong character of the tendency makes it a difficult thing to deal with. Human nature being what it is, there seems little hope for improvement of the stock save through the slow process of education of parents in child-training. That this is in the experimental stage no one will deny. Witness the matter of feeding habits, or of discipline, or of reward and punishment. The lack of unanimity in such matters attests to their unsettled character. And even were there relative unanimity, this would be seriously challenged by those special cases which constitute the future neurotics. Yet psychologic medicine did a notable service in pointing to the childhood precursors of the full-fledged adult neurotic reaction, and in indicating the need for early treatment. Child psychiatrists daily treat and cure numbers of children whose illnesses bear all the earmarks of the full-fledged neurotic performance of the adult, and which doubtless would settle down into a confirmed neurosis or neurotic tendency if they were left untreated. In general, then, proper mental hygiene for every child is needed, and in the absence of complete evidence of what constitutes proper hygiene, one may suppose that emotional security in one's family, stimulating comradeship, and training in emancipation are prerequisites. The upshot of all this is that the accidents of nature may preclude throttling the flow of neurotic characters at the source, but a decent training régime adapted to the individual and his social needs should do much to eliminate excessive and unnecessary human wastage.

Of more direct importance to the adult psychiatrist, the internist or to the general medical practitioner is the direct contribution he may make to the cure and prevention of neurotic developments. The number of patients who come to medical consultation in whom neurotic factors are paramount has been generally agreed upon as constituting approximately 25 to 33 per cent of an unselected clientele. These patients require on the whole more extensive tests to prove them free of organic disease than do actual physical sufferers. Even then their problem has not really been touched. Only then begins the actual therapy. Yet the mass histories of such patients exhibit a preponderance of medical work of an exclusively preliminary nature, followed by the sketchiest treatment procedure, for the most part bearing little or no relation to a potentially demonstrable psychopathology.

There are numerous reasons for this state of affairs. These may be summarized thus:

1. Medical education has been very remiss in the psychiatric field.

2. Physicians have found the handling of neurotic patients to be time-consuming and relatively unprofitable.

3. Neurotic patients do not offer the same sure satisfaction of cure as do other patients.

4. There has been a dearth of reliable psychiatrists, and a greater dearth still of psychiatrists with a demonstrated capacity for dealing collaboratively with medical men in the handling of such patients.

To take these points up one at a time: Psychiatric medical education is still in a most disorderly state. Statistics on student hours given to such instruction must be considered as the lulling voice of appeasement, tending to stifle inquiry into the actual content of what is being taught. It must be confessed that in no other branch of medicine is there tolerated so much irresponsible teaching. At times it appears that the further the principles descend from recognized facts, the more apt they are to be recognized as "scientific," following the well known preference of mystery to knowledge. Psychiatric theory is in such an uneasy state of equilibrium because of its rapid growth and the impact of diverse trends upon it that the reduction of the material to generally acceptable propositions constitutes a hazardous undertaking. Yet this is exactly what is needed to bring under critical scientific control extremist measures which may have little import beyond feeding the appetite of the author, and the vanity which comes with making disciples. Among these I would specify particularly two "bullish" trends: the more flamboyant, left-wing psychoanalytic doctrines, and those recent surgical procedures testifying to ignorance of of or disrespect for the brain as an organ. I have seen so many ill-advised efforts to make over people that I am convinced there is a real need for a movement to conserve people. Even in this age of political, social and scientific revolution, there must be many colleagues who would join me in a program of conservatism, one of whose cardinal principles would be the "live and let live" humanism of the past.

The proper treatment of neurotic patients demands a great deal of time. It is no wonder that the busy practitioner has little desire to do this work. Treatment of the medical patient may often be left largely to assistants in the hospital so that the physician may care for a relatively large group of patients. This situation could not obtain with neurotic patients, even if there were psychiatric facilities available for their use. Successful treatment depends on personal care and this means time and patience. The psychoanalysts know this and have taken steps to insure their financial security. Nevertheless, it seems unlikely to me that a psychiatrist can expect to profit as much from his practice as can a medical specialist of like standing because of the limited volume of his patient load.

Neurotic patients appear to have a habit of refusing to get well, of remaining recalcitrant to treatment, and many physicians do not thrive on this. Often the opportunity to see patients get well under one's ministrations within a reasonable time is a determining influence in the choice of career. Only those who are willing to put off results to a remote future should attempt the treatment of the neurotic.

There are too few psychiatrists, and they are spread very thinly the country over. The concentrations occur in a few large centers, and this will continue to be the case until physicians generally discover that psychiatrists can give valuable collaborative service in the handling of neurotics. The borderland between functional and structural diseases will be the meeting place for this type of collaborative effort. Every town of five thousand could support a psychiatrist who had the confidence of his medical colleagues. Psychiatric assistance on the ground often has a great advantage over that given by necessity a long distance away.

The needs then as far as the medical profession goes are (1) for more and better psychiatric education, of a sort which will both train specialists for the hard jobs and make others psychiatrically intelligent for the lesser jobs, and (2) for a greater degree of collaboration between internist and psychiatrist.

Actually working with neurotics reveals as a central core of the reaction an egocentric personality, ill at ease with its fellows, and constantly involved in the details of life as these impinge on it. There is by contrast a relative inability to lose oneself in social movements transcending the individual. Yet experience shows that much neurotic complaining may be by-passed if not resolved when such patients are brought to adhere to some such movement.

Heroic times which demand a vision of the idealized self, stripped of selfish motive, and acting as a unit in a joint movement with strong social connotations, provide the most favorable opportunity for counter measures against neuroses. I was told in Germany in 1934–35 that neurotic complainers had practically disappeared from the clinic clientele, and my own observations bore this out. The explanation, not unreasonable in itself, was that the people had grasped, or submitted to, a new ideal, which reversed the usual view of society as a vague something to be exploited for personal gain, to that of a vital organism which demanded for its success the contribution of everyone, and which then paid off the individual in immediate gains. In this particular case these were the freedom from anxiety which the domestic tranquility brought, a brand of tranquility which we would find most distasteful but which the German soul treasured. It further paid off its obligation by promises of future gains. That these were to be achieved at another's expense mattered little.

The point of this tragic example, translated into more acceptable equivalents meeting our needs, is as follows: Neurotic self-centeredness may be by-passed by adherence to a large social movement which offers the neurotic satisfactions at least equivalent in value to those he must shed if he joins the movement. It may be that this therapeutic tour de force is in reality only a change of the scene of combat, with personal neurosis swallowed up in a mass neurosis. At least that is the way the current German efforts look to me.

Yet if we turn to the reports on the neurosis situation from Britain, where we may assume psychologic conditions much more closely approaching ours, the same sort of general rule is noted. There has not been any increase in neurosis from the war; in fact, there may be less complaining. After all, the neurotic's complaints are constructed in part on the premise that he is in a peculiarly vulnerable position as compared with his fellows. If the plain facts show all to be in the same fix, and complaining is socially undesirable, then it follows that important forces are at work to curb neurotic expression, if not development.

The operation of the Selective Service has revealed the alarming fact that more rejections occur for neuropsychiatric difficulties than for any other cause, and of these, the greatest number are due to neurotic difficulties. It is so serious that all medical advisory board psychiatrists are asked to make monthly reports showing the reasons for rejections of such cases. It is not unlikely that many personality abnormalities of this sort reach a clinical significance justifying rejection because of the personal gain inherent in the manifestation of the neurosis in this situation. Selective Service as it is now administered, and as was the case in the last war, makes it economically profitable to possess poor health. I offer no cure for this situation, but obviously civilians should be asked to make sacrifices commensurate with those made by the men called to military service in order to lessen the economic differential now favoring ill health of whatever sort. Total war should mean total participation, each according to his ability. Ability should be judged objectively by past record, with a clear awareness of the distortions produced by the motive of personal gain.

Actually neuroses may be expected to multiply after the crisis is past. Then the neurotic drive, no longer lost in acceptable social performance, turns inward again, the more so since the post-crisis period will abound in pressure groups catering to his egocentric needs.

The problem of the control of neuroses becomes one of preventive psychiatry, or mental hygiene, with implications for every member of the body politic. It must be recognized that most neuroses are the exquisite expression of character abnormality with its roots in childhood experience, which then molds current happenings to its own use. If the general public were to hold to such a view of neurosis, the story of public generosity in the post-crisis dealings with neurotics might be totally different from our past record.

The moral of all this is that it must be shown that neurosis (like crime) does not pay. This lesson will be painfully hammered home in individual cases with great expense in time, effort, skill and money through the ministrations of specially trained psychiatrists working to achieve personality readjustment. It may be prevented in the mass by an aroused public conscience which will expect each man, healthy or otherwise, to do his duty in the world emergency, in war or in peace, and to gain his entire reward from the fact of a duty well done, an individual contribution to our common weal, which alone can insure the welfare of our successors.

When this title was assigned me, I had to face the fact that I did not know the answer. I did not decline to talk, because I felt reasonably sure no one else knew the answer either; and because I welcomed the opportunity to present some items of concern over the problem for your consideration, since it is you who will continue to be plagued by the neuroses, and it is you, en masse, who can catalyze the public conscience to exert its potency in the prevention of neuroses.

Say surgery gives best results in treating high blood pressure. The outlook for patients with a high level of blood pressure and spasmodic contractions of the minute blood vessels of the eye is much more favorable following an operation in which certain nerves controlling the contraction and dilation of the blood vessels are severed than is the outlook following medical treatment, WARD WILSON WOODS, M.D., AND MAX MINOR PEET, M.D., Ann Arbor, Mich., report in *The Journal of the American Medical Association* for November 1, 1941.

"The surgical treatment of patients with malignant hypertension has resulted in a survival of 33 per cent after five years," the two surgeons add, "whereas following medical treatment . . . the mortality was more than 99 per cent."

Their findings are based on a comparison of the results of the nerve severance operation in 76 patients with those reported by two other physicians from medical treatment of 219 patients with the same condition. The surgical group were followed for from five to seven years after the operation and the medically treated group were followed from five to nine years. The discrepancy between the length of the two studies does not obviate relatively accurate comparison, the two surgeons say, because the time span of the medical group is calculated from the time of the first observation of the patient whereas in the surgical group it is calculated from the time of operation.

DIGITALIS CRUDE DRUG PREPARATIONS VERSUS CHEMICALLY PURE PRINCIPLES*

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IN HIS classic monograph Cushny[1] points out "that any digitalis preparation that is not cumulative or does not produce nausea is inert or at any rate so weak that it is valueless." The cumulation of the drug in the heart muscle is essential for the initiation and maintenance of therapeutic effect. The toxic manifestations of nausea and vomiting presumably are due to drug action upon the vomiting center as a result of overdosage.

At one time it was customary to administer digitalis to the point of toxicity as the means of assuring full therapeutic effect, but this idea was fallacious, since it was based upon an assumption that the therapeutic and toxic values of the drug always run parallel. As we have since learned, this is not the best practice. This fact, however, is not at all new, because Withering[2] in the later years of his study urged that in giving digitalis nausea be avoided as undesirable. Another cause for confusion has been a persistent tendency on the part of some clinicians to designate dosages in terms of cat units rather than in terms of therapeutic effect.

The biologic testing of digitalis was adopted more than a quarter of a century ago because the crude drug preparations then available varied so greatly in their potency. This method of assay is based upon the ability of the drug to cause the cat or frog heart to stop beating and therefore is chiefly a measure of toxicity and not a guide to therapeutic dosage.

It is now recognized that so-called biologic standardization of a crude drug is at best a makeshift that must give way to more accurate methods when the active principles of the drug are isolated in chemically pure form.

As to the clinical value of animal test methods for digitalis, Gold et al.[3] recently said: "Prior to any official method of assay, specimens of digitalis on the American market were reported to vary in potency by as much as about 300 per cent . . . intensive work on the assay of digitalis during the past 35 years has not improved that situation sufficiently, and preparations of outstanding tinctures of digitalis at the present time vary by nearly 300 per cent when assayed by the cat method, although they are all labeled U.S.P. XI. The cat and the frog methods do not necessarily yield comparable values. Which values are applicable to humans has never been satisfactorily determined . . . results by the two methods have been applied to tests on humans with auricular fibrillation and regular sinus rhythm by a technique in which comparisons are carried out on one and the same subject. These experiments show that animal assay values are misleading, that assays with U.S.P. frog method are not applicable to humans, that assays with the cat method give results that are more nearly applicable to man in the case of digitalis leaf . . . and that a final evaluation of the potency of a preparation of digitalis must be based on determinations on man directly."

In full confirmation of the unreliability of biologic testing, DeGraff and co-authors[4] say: "Preparations of the same potency with regard to their ability to produce death in a cat or frog will vary markedly in their therapeutic potency as applied to man .... Furthermore, in our laboratory we have recently found that various samples of Digitalis purpurea, although possessing identical cat unit potency, may be weaker or stronger as far as desired clinical therapeutic effects are concerned."

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* Tables concerning details of the effect of treatment have been omitted because of limitation of space.

Withering[5] recognized the dangers involved in digitalis overdosage and warned against permitting these to develop: "slow pulse (as slow as 35 per minute), diarrhea, vomiting, giddiness, cold sweats, convulsions, death." Hence, we may now say with confidence that the biologic assay of digitalis has added practically nothing to the efficient clinical use of this drug. Throughout the past century, based upon Withering's studies, congestive cardiac disturbances were treated with galenical preparations of the leaves of Digitalis purpurea. The chemical isolation of the three active principles of this species, however, marked an advance over the crude drug products previously in use and lead to more accurate observations as to the mode of digitalis action. Of the three principles, digitoxin, gitoxin and gitalin, it was found that digitoxin more nearly produced typical digitalis action, but upon trial it has proved too toxic for the best clinical results.

Continued studies of digitalis principles especially by Stoll[6] and his associates revealed that digitoxin, gitoxin and gitalin are not the true or initial glycosides of the purpurea species. Digitoxin and gitoxin are in reality derived through the action of enzymes, moisture, etc., which cause the hydrolytic loss of a glucose radical from the 'mother' substances, purpurea-glycoside A and purpurea-glycoside B respectively, whereas gitalin is apparently obtained from a compound richer in sugar, the exact nature of which is undetermined. Attempts to isolate the principles of purpurea in chemically pure form were not encouraging, however, because these bodies are amorphous and closely associated with resins and other impurities, the removal of which requires a tedious process with considerable loss of material.

As a part of this long series of investigations it was shown that digitalis leaves vary from year to year in their content of active substances and with the different geographic areas from which they are obtained. Thus, crude drugs from different localities were revealed as bearing from 0.1 Gm. to 0.6 Gm. of digitoxin per kilogram, and as the digitoxin increased the gitoxin declined. Since digitoxin more nearly represented typical digitalis effects, drugs low in this substance were less satisfactory than those containing larger quantities despite the inverse fluctuation of gitoxin. All of these variabilities go far to explain the unreliability of crude drug products.

With this history of unsatisfactory experiences with the purpurea species, the attention of investigators was directed toward the lanata plant, or yellow digitalis. Wokes[7] found that the leaves of Digitalis lanata show an efficiency four times greater than the leaves of Digitalis purpurea. Similarly, Heim[8] compared the differences of both as to their efficacy and showed that, provided there was equal concentration, the maximal effect on "Straub's hypodynamic heart" was quicker in lanata, but that the diuretic effect prevailed in purpurea.

Stoll and Kreis[9] showed this new plant to be rich in characteristic glycosides that are readily obtainable in chemically pure form. Through this study they developed Digilanid, which is said to be a complex of lanatosides A, B and C, in the percentage (46 per cent A, 17 per cent B and 37 per cent C) in which they occur in the highly active fresh leaf and so adjusted in the finished product that variations of more than 2 per cent do not occur. A preparation of reasonable uniformity presumably is thus obtained.

Studies made long ago showed that when digitalis principles are deprived of their sugars they are less readily absorbed and lose in therapeutic value but retain their toxicity. Hence, by retaining the full sugar content of the glycosides optimal absorption from the digestive tract is assured and cumulation in the heart muscle is more satisfactory. Svec[10] and Rothlin[11] have both shown that Digilanid is absorbed regularly to the extent of about 50 per cent. This is a splendid ratio as compared with other products.

Moe and Visscher[12] by pharmacologic studies upon the heart-lung preparation demonstrated that the toxicity values of the lanatosides run fairly uniform but that their therapeutic value, or their ability to improve cardiac efficiency, is much less constant. This explains why it is necessary to maintain a definite relationship between the different glycosides in a total preparation if dependable action is to be obtained from it.

All investigators stress that Digilanid possesses the advantage of being pure, that it is well and quickly reabsorbed from the gastrointestinal tract and well tolerated. With respect to its reliability, Scherf and Boyd[13] say: "If one employs Digilanid, a mixture containing several glycosides, or assayed pulverized leaves from Digitalis lanata, the conviction is soon gained that it represents a highly active, powerfully cumulative form of digitalis which exhibits all of the properties expected from a good preparation of this drug."

Hochrein and Lechleitner[14] were among the first who studied the clinical effectiveness of Digilanid. They treated 60 patients, mostly males from 12 to 79 years of age, and summarized their results by saying that Digilanid was a striking success in congestive heart failure. It was well tolerated even in the presence of a congestive gastroenteritis. Therefore, they recommend it especially for a long continued therapy for maintenance purposes, 1 tablet or 1 c.c. of the liquid per day being sufficient in almost all patients. Subsequently numerous papers have appeared in which this product is mentioned.

Because of the obvious points of advantage the chemically pure active principles of a plant have over the crude drug it seemed worth while to compare Digilanid and the powdered leaves of digitalis purpurea. Attempts at clinical comparison at once experience difficulties, because, as Fishberg[15] has pointed out, the action of digitalis is not altogether understood and seems to be more complex than investigations heretofore have indicated. Another disconcerting fact as mentioned by Edens[16] is that each sick heart possesses its own digitalis dose and each patient, therefore, must be treated individually. This is due, of course, to the fact that cardiac reserve is one of the most important conditions underlying the response of the heart to medication. Furthermore, consideration must also be given to the previous or simultaneous use of some other drug, such as barbiturates, caffeine, morphine, etc., which may alter digitalis action through antagonism or potentiation as the cause may be.

It is recognized that present methods of clinical comparison are inadequate, but it is only through consideration of their weaknesses that improvement is made possible. So far only a few studies of this nature have been conducted.

Adams and Gregg[17] studied 56 patients whose treatment was repeatedly alternated with Digilanid and a standard preparation of powdered leaf of digitalis. The unit dose of digitalis leaves (1 U.S.P. unit) was 0.1 Gm., whereas the unit dose of Digilanid (equal to 1 cat unit) consisted of $\frac{1}{3}$ mg. Generally they found a striking similarity in the clinical conditions after use of powdered leaf and Digilanid. No important difference could be made out between the two preparations concerning the symptoms and signs of intoxication. With the exception of 2 cases, both were equally tolerated. These 2 cases should be mentioned. Taking Digilanid, 1 patient avoided his abdominal discomfort, which occurred immediately after intake of powdered leaf, whereas another came back to the leaf because Digilanid made her suffer from stiffness of the left arm. This discrepancy is not explained.

In my series, 25 patients, only 3 of whom were under 50 years of age, were treated first with U.S.P. Digitalis powdered leaf in plain and sugar-coated tablets ($\frac{1}{2}$ to 1 cat unit) and then with Digilanid tablets (0.333 mg. or 1 cat unit), liquid, and ampules 2 c.c. each for intramuscular injection and thoroughly studied in relation to toxicity, tolerance, and maintenance dose. The observations extend over a period up to 12 years. All patients (9 males and 16 females) were in a state of decompensation ranging in degree of severity from slight pulmonary and hepatic congestion to generalized anasarca with transudate in the abdominal and pleural cavities. Digitalis treatment was indicated in each case; in some patients in spite of infarction it was indicated because of complicating acute cardiac decompensation.

Etiologically, the cases are grouped as follows:

	Number of cases
Generalized arteriosclerosis with cardiovascular manifestations	8
Hypertension	6
Malignant hypertension	1
Rheumatic heart disease	2
Subacute bacterial endocarditis, superimposed on an old rheumatic valvular disease	1
Coronary thrombosis with myocardial infarction	3
Chronic myocarditis with myxedema and obesity	2
Toxic myocarditis	2
Total	25

All patients exhibited associated pathologic conditions or complications of various types as might be expected in the later period of life (diabetes, morphinism, paralysis agitans, bronchial asthma, and compound fracture). In order to properly treat the cardiovascular conditions as well as the complications it was necessary to establish the full effects of digitalis just as soon as possible. Each patient required a different quantity of digitalis for the desired effect depending upon the condition of his cardiovascular system. The total dose varied from 0.3 to 4.5 Gm. of a crude drug product, and the time of digitalization varied from 1 to 10 days.

All patients received digitalis powdered leaf in a daily maintenance dose of from 0.1 to 0.4 Gm. as needed over a very long period. Most patients did not tolerate the drug well. Direct signs of toxicity were indicated by pulsus bigeminus and trigeminus, anorexia, nausea, vomiting, diarrhea, green scotomata. Compensation was mostly unsatisfactory and seemed most likely to be upset when the patient obtained a new supply of the drug. This was probably due to the variability in potency as mentioned previously.

At the time of persistent toxic symptoms digitalis leaf was replaced by Digilanid. An interval of detoxification in which the stored digitalis was eliminated from the body was given to the patients. In 3 cases acute decompensation recurred secondary to complications of coronary thrombosis, pulmonary embolism, and diabetic coma. With Digilanid an average daily maintenance dose of 1 to 2 tablets seemed sufficient to clear up all alarming toxic symptoms. One patient with malignant hypertension and auricular fibrillation required higher doses. Digilanid was well tolerated, general improvement set in, and compensation became well established. Thus a basic condition for better dietary control in the cases of diabetes and for specific treatment of any of the other complications was given. The pulse rate was unaltered by either the whole leaf or Digilanid after initial digitalization. As usual the blood pressure was not much influenced.

Three patients with auricular fibrillation deserve special comment. Although 1 of them died of intercurrent bronchopneumonia, Digilanid maintained a level of favorable compensation for all without toxic symptoms. These cases improved subjectively with the pulse becoming regular. Six of the 25 patients have died, but the remaining 19 clinically are doing very well.

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SUMMARY

Attention has been called to the fallacies associated with the so-called standardization of digitalis by animal tests.

There appears to be a logical basis for preferring chemically pure preparations to the older crude drug products. Methods for the clinical comparison of drug efficacy have been neglected and are unsatisfactory, but it is hoped that improvements will be made as this subject is investigated further.

The clinical comparison of 25 patients, treated successively with powdered leaf of digitalis and Digilanid, is reported.

Those patients given Digilanid manifested better tolerance for it than for the powdered leaf as shown by a greater freedom from nausea, vomiting and disturbances of rhythm.

About 70 per cent of the patients required 1 tablet (0.333 mg.) of Digilanid for maintenance of digitalis action, and 30 per cent needed slightly more or less than this amount. Fractional doses were obtained by using carefully measured quantities of the liquid form. Once this maintenance dose was established medication thereafter proceeded much more satisfactorily than with the more variable crude drug preparations.

It appears that chemically pure digitalis glycosidal products are more satisfactory for clinical use than crude drug preparations.

371 Commonwealth Avenue.

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War ratio of male to female births. The normal proportion of male births over female births was even greater in every European belligerent power during the last years of World War I and for perhaps two or three years afterward, *The Journal of the American Medical Association* for November 22, 1941, says in answer to an inquiry.

"The proportion of male births increased also in many of the important European neutral countries," *The Journal* continues, "including Norway, Sweden, the Netherlands and (for the year 1920) Switzerland. There was an observable rise in Australia, but not in the United States or in New Zealand, among the non-European belligerents. The increase in the proportion of male births, where observed, was of short duration."

As for the reasons for this increase, *The Journal* says that "a simple explanation that seems entirely adequate has not yet been offered."

Report on toxicity of mapharsen. A review of scientific literature since 1935 shows that mapharsen is less toxic than neoarsphenamine in the treatment of syphilis, Edward A. Levin, M.D., and Frances Keddie, M.D., San Francisco, report in *The Journal of the American Medical Association* for January 31, 1942.

"To date," the two physicians say, "only six fatalities from mapharsen have been reported. This rate is remarkably low considering that over twelve million ampules of mapharsen have been manufactured. The deaths were reported as due to kidney damage in 2 cases, hemorrhagic encephalitis in 1, aplastic anemia in 2 and agranulocytosis in 1. . . .

"About 90 per cent of the patients who have severe gastro-intestinal reactions to the arsphenamines can tolerate mapharsen in therapeutic doses. . . .

"The United States Navy statistics on observations of reactions to neoarsphenamine and to mapharsen among patients comparable as to age, sex and general condition of health indicate that mapharsen is definitely the less toxic."

THE TREATMENT OF THROMBOPHLEBITIS*

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THROMBOPHLEBITIS of the extremities is a complex disease characterized in the acute phase by a continuously changing picture.[1] By definition, it is primarily an inflammation and occlusion of the veins, but the other components of the circulation may be affected in varying degree at different times. As the acute inflammation subsides there may or may not be a residual of chronic venous obstruction and sometimes chronic lymphatic obstruction also. Persistent venous and lymphatic obstruction may produce profound changes in the extremity. Proper treatment in any phase of thrombophlebitis necessarily depends upon a logical appreciation of the pathologic physiology of the circulation at that stage at which treatment is instituted.

Acute Phase of Thrombophlebitis

Etiology.—The cause of thrombophlebitis is by no means exactly known. Direct injury to the wall of a vein and presumably infection of the lymphatics or the vein are the usual precipitating causes of venous thrombosis. Factors which predispose to the development of thrombophlebitis include surgery, particularly abdominal operations; the puerperal state; prolonged rest in bed, especially from a debilitating illness; obesity; and anemia. Previously diseased veins in which the flow of blood is retarded from any cause are peculiarly susceptible to thrombophlebitis.

Clinical Manifestations.—The first symptom of acute thrombophlebitis usually is mild fever. This is followed within a few days by pain along the course of the involved veins. At this stage the veins are probably not completely occluded. However, a thrombus soon forms, producing signs of venous obstruction, including edema of the involved extremity. The diseased veins become firm, cordlike and tender. As the thrombus spreads, there is a more marked constitutional reaction, with increased fever, chills, prostration, leukocytosis, and a rapid sedimentation rate. Now there may be pain in the entire extremity, and the local skin temperature may be lowered appreciably. This latter phenomenon may be evanescent, recurrent or persistent. Such lowering of skin temperature is often accompanied by mottled cyanosis of the entire extremity, especially pronounced in the digits.

Pathologic Physiology.—Probably the first organic change in the venous system in acute thrombophlebitis is the development of inflammation in a segment of the vein wall. This is soon followed by thrombosis of the involved segment, with resultant occlusion of the vein. If the principal veins of the extremity are affected, there will be marked changes in all four of the components of the circulation (fig. 1). As the thrombus forms there is immediate damming back of the venous blood and slowing of the venous circulation. Consequently, the blood pressure rises in the veins distal to the point of occlusion.[2] These veins become dilated and their valves incompetent, allowing a reversal of blood flow into the adjacent tributaries, which then serve as collateral channels for the purpose of circumventing the area of venous obstruction. The magnitude of these changes depends principally upon the location and extent of the thrombosis. If the thrombus occludes a principal vein and its main tributary, the changes will be more marked than if one of these vessels remains patent.

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* Read at the Joint Meeting of the Medical Society of the District of Columbia and the Baltimore City Medical Society, November 7, 1941.

Concomitant with the development of venous thrombosis, there is often a varying degree of arterial spasm.[3, 4] Severe spasm is usually seen only in the early stages of thrombophlebitis. The arterial spasm may be of short duration, may be intermittent, or may persist for several days or longer. It affects principally the small arteries but may even involve the main trunks in some cases. As a consequence of the arterial spasm, there is a diminished amplitude of the pulse. There is also a diminution in the rate and volume of arterial blood flow with resultant tissue anoxemia in the involved extremity. The generalized pain in the extremity is largely the result of this ischemia.

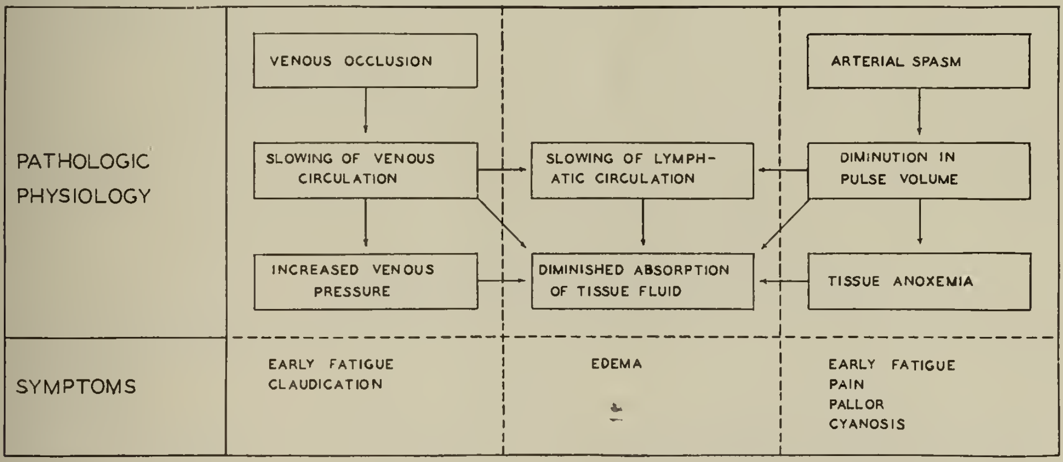
PATHOLOGIC PHYSIOLOGY
SYMPTOMS
VENOUS OCCLUSION
SLOWING OF VENOUS CIRCULATION
INCREASED VENOUS PRESSURE
SLOWING OF LYMPHATIC CIRCULATION
DIMINISHED ABSORPTION OF TISSUE FLUID
ARTERIAL SPASM
DIMINUTION IN PULSE VOLUME
TISSUE ANOXEMIA
EARLY FATIGUE
CLAUDICATION
EDEMA
EARLY FATIGUE
PAIN
PALLOR
CYANOSIS

FIG. 1. Schema of alterations in circulation of an extremity during the acute phase of thrombophlebitis.

With the occlusion of the main venous channels, the slowing of venous blood flow, and the rise in venous pressure, there is retardation of lymphatic circulation. This is enhanced by the diminished amplitude of the arterial pulse.[4, 5] Consequently, the lymphatic vessels become distended and their valves incompetent.

The påthogenesis of edema in acute thrombophlebitis is complex. Of prime importance is the obstruction to the main venous channels with resulting increase in the venous pressure locally. Slowing of the lymphatic circulation and tissue anoxemia from arterial spasm also contribute to the delay in absorption of tissue fluid. As the tissue fluid accumulates, clinical edema is manifested.

POST-THROMBOTIC PHASE OF THROMBOPHLEBITIS

Etiology.—As the acute phase of thrombophlebitis subsides, there is a natural tendency for normal circulation to be reëstablished in the affected extremity. This tendency is frustrated in many cases because of the permanency of occlusion of the main venous channels. In such cases there will be persistent circulatory changes, which constitute the post-thrombotic syndrome.

Clinical Manifestations.—The severity of the symptoms of the post-thrombotic phase of thrombophlebitis depends upon the extent and location of the thrombus. In cases in which the main venous channel and its principal tributary are obstructed, there is usually persisting edema.

As time passes, these changes may be partly relieved because of the development of collateral channels.[6] In other cases in which the venous occlusion is less widespread, edema may be intermittent, appearing only after prolonged exercise or standing. In both of these groups of cases, varicose veins are likely to develop. Finally, there are cases in which the degree of venous obstruction is so limited that symptoms do not appear under ordinary circumstances. In these cases, however, there is some retardation of venous return. If the retardation becomes intensified by some additional factor, such as pregnancy, obesity, or recurrent thrombophlebitis, edema and varicosities may develop. In all cases in which the degree of venous obstruction is sufficient to engender intermittent or persistent edema, recurrent lymphangitis, cellulitis and thrombophlebitis, as well as superficial ulcerations, are likely to appear.

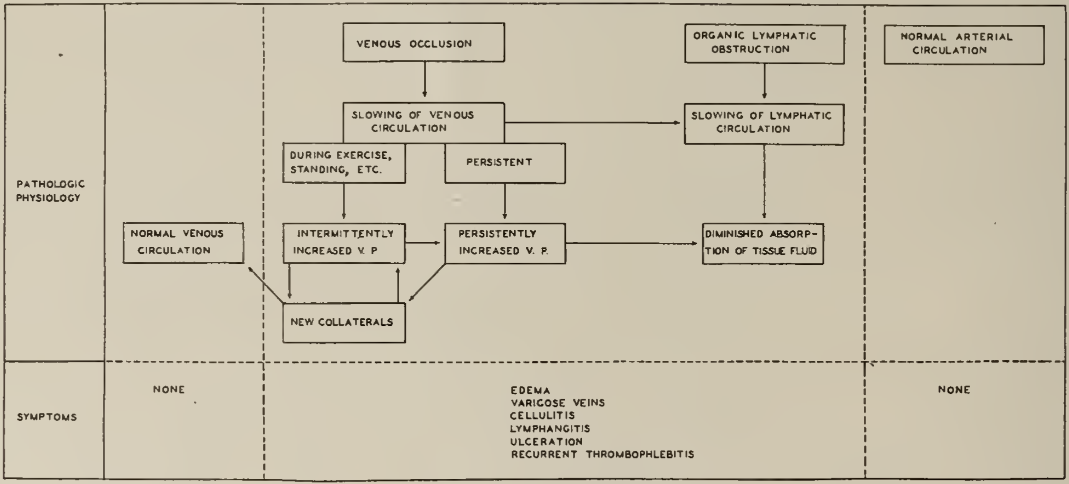
PATHOLOGIC PHYSIOLOGY
SYMPTOMS
VENOUS OCCLUSION
ORGANIC LYMPHATIC OBSTRUCTION
NORMAL ARTERIAL CIRCULATION
SLOWING OF VENOUS CIRCULATION
SLOWING OF LYMPHATIC CIRCULATION
DURING EXERCISE, STANDING, ETC.
PERSISTENT
NORMAL VENOUS CIRCULATION
INTERMITTENTLY INCREASED V. P
PERSISTENTLY INCREASED V. P.
DIMINISHED ABSORPTION OF TISSUE FLUID
NEW COLLATERALS
NONE
EDEMA
VARICOSE VEINS
CELLULITIS
LYMPHANGITIS
ULCERATION
RECURRENT THROMBOPHLEBITIS
NONE

FIG. 2. Schema of alterations in circulation of an extremity during the post-thrombotic stage of thrombophlebitis.

Pathologic Physiology.—In the post-thrombotic syndrome there is a varying degree of venous obstruction with consequently varying alterations in the venous circulation (fig. 2). The original thrombus is seldom if ever resorbed, so that the blood which had formerly traversed the obstructed segment of vein seeks other routes. In some cases these collateral channels may be entirely adequate, so that the venous pressure remains normal under all conditions, and there are no symptoms. In other cases, the collateral channels are adequate only during rest. During exercise or with prolonged standing or as the result of additional venous obstruction, the veins become overfilled and the venous pressure rises to abnormal levels. In still other cases, the collateral channels are inadequate at all times, and the venous pressure is persistently higher than normal. In any case in which the venous pressure rises sufficiently as the result of venous obstruction, edema and a tendency to the varicose state are manifested. The situation may change with time as the efficiency of the collateral channels increases.

In the post-thrombotic phase, the slowing of the lymphatic circulation depends primarily upon the amount of elevation of the venous pressure. In those cases in which the venous pressure is abnormally high at rest or during exercise or prolonged standing, the lymphatic vessels assume a kind of chronic varicose state. In addition, there may be perilymphatic fibrosis which causes permanent obstruction to these vessels.

The factors which produce edema in the post-thrombotic phase are similar to those of the acute phase of thrombophlebitis, with two important exceptions. In the first place, the tissue anoxemia which results from arterial spasm in the acute phase has disappeared. As a matter of fact, the arterial circulation is not significantly altered in the post-thrombotic syndrome. In the second place, there may be organic occlusion of the lymphatic vessels, which will provide a cause for edema even when venous obstruction may have been relieved.

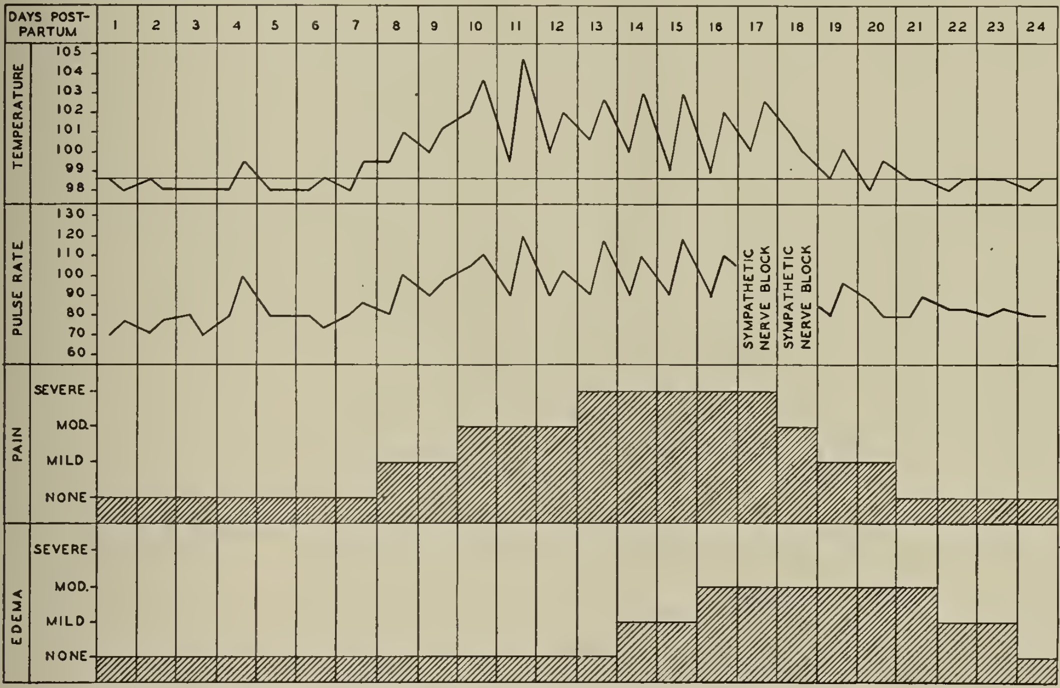

FIG. 3. Case of post-partum, bilateral acute femoroiliac thrombophlebitis. Note rapid subsidence of symptoms after lumbar sympathetic block with 1 per cent novocaine.

TREATMENT OF THE ACUTE PHASE OF THROMBOPHLEBITIS

The ultimate results in thrombophlebitis depend principally upon the location and extent of the thrombus. The thrombus forms in a relatively stagnant circulation and extends into adjacent veins in which the flow of blood is diminished. Therefore, the first object of treatment should consist in adopting measures to prevent the formation of a clot or to limit its propagation by increasing the rate and volume of venous blood flow. If a maximum increase can be established and maintained when the first symptoms of thrombophlebitis appear, organic occlusion of the diseased veins may be entirely prevented. Heparin may be an additional aid in this stage of the disease.

Improvement of the rate and volume of blood flow in the affected extremity is obtained by several procedures. The extremity is elevated slightly above the level of the heart in order to overcome the effect of hydrostatic influence. Heat is applied to the extremities and lower part of the abdomen, usually by means of a heat cradle. The temperature should be controlled within limits of from 95° to 102°F. The purpose of raising the environmental temperature is to obtain vasodilatation and thereby increase the flow of blood in the veins. From a physiologic viewpoint, maximum vasodilatation is obtained most readily by interrupting the sympathetic pathways. This is accomplished in the treatment of thrombophlebitis by injecting 1 per cent novocaine solution into the region of the sympathetic ganglia which supply the vessels of the involved extremity. The technic for this injection, as described by Ochsner and DeBakey,[4] is simple and effective. Interruption of the sympathetic pathways should be used in all cases in which there is clinical evidence of arterial spasm and in those cases in which there is not a prompt relief of pain as the result of elevating the extremity and applying heat (fig. 3). It is to be remembered that interruption of the sympathetic pathways by means of novocaine is only temporary. A single injection may permanently reëstablish normal arterial flow, but in some cases the injection must be repeated even several times at intervals of from 12 to 24 hours before this result is obtained.

As far as the patient is concerned, pain is the most disturbing symptom of acute thrombophlebitis. There are two types of pain, local pain along the course of the involved veins due to inflammation and generalized pain due principally to ischemia resulting from arterial spasm. The generalized pain may be present even when superficial evidence of vasospasm is lacking; that is, the skin temperature may be normal or even elevated. Complete relief of vasospasm brings prompt surcease from the generalized pain. As soon as the ischemic pain has been banished, the patient finds that he can move his extremities with ease and freedom from discomfort. While the use of exercise at this time is a controversial point, it is our opinion that considerable value is to be gained by stimulating blood flow in this way. Any measure which adds to the rate and volume of flow of blood in the arteries and veins further minimizes the opportunity for propagation of the thrombus. Therefore, the patient is encouraged to move his extremities freely, and simple exercises are prescribed. The local pain usually disappears within a few days, as the acute inflammation subsides. In the meantime, symptomatic measures are employed.

The severity of edema in acute thrombophlebitis depends upon the extent of the thrombosis (rise in venous pressure), the amount of tissue anoxemia, and the degree to which the lymphatic circulation is slowed by elevation in the venous pressure and diminution in the amplitude of the arterial pulse. Therefore, the measures mentioned above for limitation of the extent of thrombosis serve also to control edema. In most cases of iliofemoral thrombophlebitis edema disappears within a week after appropriate treatment has been applied. However, it must be remembered that in many cases the venous occlusion persists and the collaterals are still inadequate except while the patient is in bed. When he returns to activity out of bed, edema may promptly reappear. Under these circumstances, methods must be used for prevention of overfilling of the superficial veins and lymphatics until a totally adequate venous collateral circulation has developed. Before the patient is allowed out of bed, properly fitted elastic stockings are applied. Thereafter the length of time the patient spends out of bed and the amount of exercise which he is permitted are strictly limited by the time of appearance of edema. These measures must be continued until such time as the patient no longer develops edema as the result of activity. The proper time for removal of restrictions can be determined either by giving the patient a short period of trial without elastic stockings or by measurement of the popliteal venous pressure during rest and exercise.[2] If edema recurs during the trial period or if the venous pressure is abnormally elevated, treatment must be continued. Failure to follow this kind of plan meticulously will invariably lead to the development of one or more calamitous sequelae.

Dislodgement of an embolus may occur in any case of thrombophlebitis. This is especially true in cases of thrombosis of the deep veins of the calf and of the superficial veins of the thigh and leg and in cases of suppurative thrombophlebitis. In all these cases, ligation of the involved veins above the diseased portion is always indicated.

TREATMENT OF THE POST-THROMBOTIC SYNDROME

In the post-thrombotic stage of thrombophlebitis, treatment is directed toward the prevention of complications. The foregoing discussion of the treatment of the acute stage includes in its latter part all that need be said of the treatment of the post-thrombotic syndrome in uncomplicated cases. Of prime importance is the control of edema by means of elastic stockings and restriction of activity and standing according to the methods already given. In patients who have apparently had complete functional recovery from thrombophlebitis, a cautious watch must be kept whenever any factor develops which tends to intensify venous obstruction or to predispose to recurrence of thrombophlebitis. The best example of this kind is in the case of pregnancy.[7]

In those cases in which varicose veins have already developed, the treatment will depend upon the state of the deep veins and the extent of collateral circulation. When the deep veins are permanently and completely obstructed and the venous pressure in the dilated superficial veins is higher than normal at rest or during exercise, surgical treatment of the superficial veins should not be attempted. It will lead to an increase in the amount of edema and probably to additional complications. However, elastic stockings can be worn to prevent further dilatation. On the other hand, when the deep venous circulation is adequate, superficial varicosities may be obliterated with impunity by means of ligation and injection of sclerosing agents.

Recurrent lymphangitis and cellulitis are common in improperly treated cases during the post-thrombotic stage. They can be prevented by controlling edema. If the patient is seen after lymphangitis and cellulitis have already appeared, prompt improvement usually can be obtained by means of the following measures: bed rest, elevation of the affected extremity, employment of a temperature-controlled heat cradle, application of warm moist compresses, and administration of sulfanilamide. When the acute inflammation subsides, further treatment is the same as for an uncomplicated case.

The most disabling complication which may follow iliofemoral thrombophlebitis is chronic ulceration. This usually develops in the lower portion of the leg. At first the ulcer is superficial, but it becomes infected and tends to spread and excavate until it attains a state of indolence that is resistant to the natural processes of healing. The first step in treatment of this type of ulcer consists in clearing up infection. In cases in which infection is very active, bed rest, elevation of the leg, and warm saline compresses should be used. As the acute manifestations subside, topical application of sulfanilamide usually proves effective in inhibiting bacterial growth. A large number of cases of chronic ulceration will heal simply by the use of Unna's paste boots. These boots must be changed about every ten days until the ulcer is completely healed. A properly fitted elastic stocking must then be substituted for the boot, and further treatment is the same as in the uncomplicated case. Those cases in which the ulcer fails to heal under an Unna's paste boot may be cured by means of an autogenous skin graft, followed by the use of an elastic stocking.

In cases in which there remains some degree of venous obstruction following thrombophlebitis, the superficial veins particularly tend to become dilated, and there is an increase in venous pressure and retardation of venous blood flow. Partly because of this slowing of the circulation, recurrent thrombophlebitis is always a potential danger. In some cases the exciting cause of such recurrence is a reactivation of the old infection. In others, it is some complication of the post-thrombotic syndrome, such as cellulitis, lymphangitis or ulceration. In still others, it is some new factor which further retards venous flow, such as pregnancy, abdominal surgery, or prolonged immobility in bed. The development of local infections of the skin, such as epidermophytosis, or the occurrence of local trauma also may initiate recurrence of thrombophlebitis. For obvious reasons, therefore, recurrent thrombophlebitis is common in untreated or improperly treated cases. By means of proper treatment, as outlined above, the incidence can be materially reduced. Once a recurrence of thrombophlebitis has developed, the treatment is in no way different than for an initial attack.

Summary and Conclusions

In thrombophlebitis there is a succession of changes in the circulation of the involved extremity. There is some variation in the intensity of these changes in different cases. Treatment of any case must depend upon an accurate appraisal of the nature and degree of the circulatory alterations at the time treatment is started and the institution of measures that will tend to correct the observed alterations. When the acute phase of severe thrombophlebitis has subsided, there usually remains some impairment of venous and lymphatic circulation. Unless adequate treatment is employed to control this impairment, serious sequelae may ensue. Chief among these are cellulitis, lymphangitis, chronic ulceration, and recurrent thrombophlebitis. Prompt recognition and appropriate treatment of these sequelae are important if further disability is not to result. As we have pointed out previously, the patient must be made to understand the objects of therapy in thrombophlebitis. He must realize that the length of time required for the accomplishment of these objects is necessarily variable and unpredictable, but that in any case it may be prolonged over a period of months or even years.[1]

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Typhus, cholera and plague immunization ordered by Army. Immunization against typhus, cholera, human bubonic or pulmonic plague of all military personnel of the United States Army who may be assigned to areas where they will be exposed to these diseases has been ordered by the Surgeon General of the Army in Circular Letter No. 3, which is published in the Medical Preparedness Section of *The Journal of the American Medical Association* for January 31, 1942.

The order states:

"That all military personnel stationed in or traveling through Asia, Africa, continental Europe or other areas where danger from epidemic typhus fever exists will be immunized with typhus vaccine as prescribed by the Surgeon General.

"That all military personnel stationed in or traveling through Asia or other regions where cholera is known to be present in endemic or epidemic form will be immunized with cholera vaccine as prescribed by the Surgeon General.

"That all military personnel under serious threat of exposure to epidemics of human bubonic or pulmonic plague will be immunized with plague vaccine as prescribed by the Surgeon General."

Regarding subsequent vaccinations the order explains that typhus vaccine may be administered every four to six months as long as serious danger of infection is present. The same applies to cholera vaccinations. As for subsequent vaccinations against plague, it is stated that additional doses "of plague vaccine may be administered whenever in the opinion of the surgeon additional stimulation of immunity is indicated."

Elaborating on the efficacy of vaccination, the order says that "it is imperative to realize that vaccination alone is not adequate for the prevention of typhus, cholera or plague. The immunity conferred by these vaccinations is incomplete and probably of relatively short duration. The practice of vaccination should therefore be considered an adjunct to the control measures prescribed in . . . [Army regulations], and such other special control measures as may be recommended by the surgeon of the force concerned."

ADENOCARCINOMA ARISING IN A PAPILLOMA OF THE FIRST PORTION OF THE DUODENUM*

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THE duodenum is the least susceptible to malignant changes of the entire gastrointestinal tract. The frequency of cancer varies in the different parts of the duodenum. Lieber, Stewart, and Lund[1] reported 2 cases of primary carcinoma of the infrapapillary portion and found 28 others that had been previously described. About the same number of primary malignant tumors have been found in the suprapapillary segment. Stewart and Lieber[2] collected 35 authentic cases involving this portion, and cited 6 of their own. The most frequent site is the peripapillary area. Lieber, Stewart, and Lund[3] presented an excellent review of the primary malignant neoplasms involving the peripapillary region of the duodenum. They collected 205 cases and added 17 of their own.

The main factor influencing this wide variation in the distribution of malignant tumors of the duodenum is the difference in the tissue cells of the three subdivisions. The peripapillary division contains the ampulla of Vater, the duct of Wirsung, and occasionally aberrant pancreatic tissue. It is from these structures that cancers usually spring. Such structures are absent in the suprapapillary and infrapapillary portions. In these parts the malignant neoplasms arise from the columnar cells lining the duodenum.

Hoffman and Pack[4] state that the usual picture is that of a cylindrical cell adenocarcinoma and that they may be scirrhous, polypoid or colloid. Instances in which a primary benign papilloma of the first part of the duodenum becomes transformed into a malignant lesion seem to be rare indeed. For this reason we feel that a detailed report of such a case is warranted

REPORT OF CASE

The patient was a colored man, aged 46 years, admitted to Gallinger Municipal Hospital on December 16, 1940, complaining of pain in his "stomach." His trouble had started 5 years before admission. The pain was localized to the upper abdomen, was intermittent, and varied in intensity and duration. At times it was dull and boring, and at other times it was sharp and stinging. It was occasionally associated with nausea and vomiting, especially after heavy meals. There was no true relation between food intake and the relief of pain. Soda and other home remedies failed to give relief of pain. About 5 weeks before admission the character of the pain changed. It became definitely localized just above and to the right of the umbilicus, and the bouts of pain and vomiting were more frequent. At first the vomitus contained only food recently eaten. The patient stated that one week before admission the vomited material became dark brown and the stools were almost black. Weight loss had been gradual, although no record of the amount was noted. The remainder of the history was irrelevant.

The physical examination revealed a muscular negro male, still well nourished. There were no gross physical abnormalities. The temperature, pulse and respiration were normal. The blood pressure was 125/70. The abdominal examination revealed an area of localized tenderness in the epigastrium just above and to the right of the umbilicus. There was no muscular rigidity or abnormal palpable masses. The stools revealed occult blood on some examinations but were negative at other times. The gastric analysis showed free HCL of 8 and total acid of 32.

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* From the Department of Surgery, Gallinger Municipal Hospital.

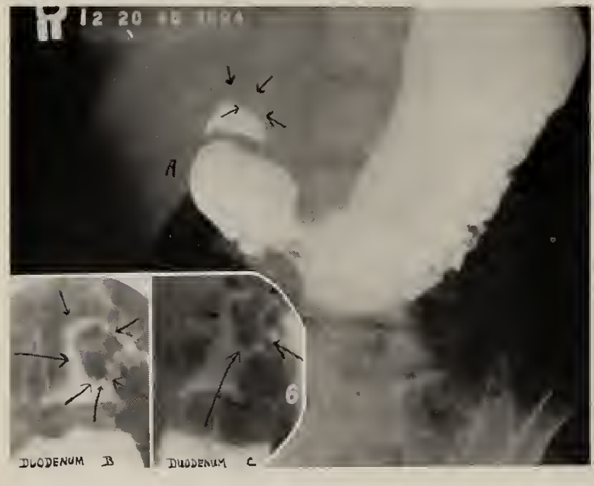

FIG. 1. A, Roentgenograms of stomach and duodenum showing the filling defect in duodenal cap produced by the papilloma; B, Spot film of duodenal cap showing filling defect produced by papilloma; C, Spot film showing mobility of papilloma. (Note distance of filling defect from duodenal cap.)

The gastrointestinal X-ray examination was reported by Dr. Conneen as follows: Fluroscopic examination showed the heart, lungs, diaphragms and esophagus essentially normal. The stomach filled well with the barium meal, was orthotonic in appearance, and showed marked accentuation of the rugal markings. Strong peristalsis was seen to pass uninterruptedly to the pylorus from the lower two thirds of the stomach. No organic lesions of the stomach were demonstrable. Both fluoroscopically and on the roentgenograms there was a constant, lobulated, filling defect in the duodenal cap. It was mobile and seemed to be carried with the stream of barium from the duodenal cap into the first portion of the duodenum. Upon manipulation the mass as represented by the filling defect could be moved freely from the cap downward in the first portion of the duodenum and back, but could not be forced through the pylorus into the stomach (fig. 1). There was no six-hour gastric retention. The appendix was outlined normally. The roentgen diagnosis is polyp of the duodenal cap.

Under general anesthesia an upper midline incision was made. The liver, stomach, spleen, and the intestinal tract below the duodenum were entirely normal. There was no enlargement of the glands in the rectal shelf. About one inch distal to the pyloric ring a mass could be felt through the duodenal wall. It was firm and freely moveable. On opening the duodenum a papilloma about 2.5 cm. by 1.5 cm. was found attached to the anterolateral wall of the first portion of the duodenum (fig. 2). The mass was of the same color as the mucosa of the bowel but showed a small ulcerated area. It was delivered through the incision and a wide excision of its broad base performed. The duodenum was then sutured and the abdomen closed in layers.

The postoperative course was marred by the development of a mechanical intestinal obstruction on the eighth day. The abdomen was again opened and a loop of the ileum was found to be incarcerated in the original incision and completely obstructed. This was released and the abdomen again closed. The convalescense was uneventful.

The specimen removed from the duodenum was submitted to Dr. Eberson for study. His pathologic report follows: Sections of the duodenal tumor show masses of atypical epithelial cells varying in size, shape and staining intensity. Hyperchromatic nuclei and many mitotic figures are seen. There is secondary alveoli formation, which contain neoplastic cells. The tissue is thrown up into papillary formation with connective tissue core. Other sections show many areas in which the basement membrane is broken through and the tumor cells have

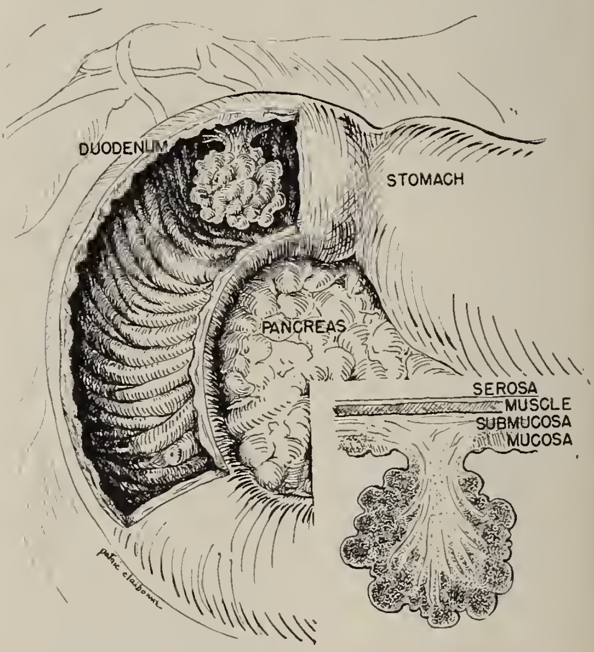

FIG. 2. Drawing showing size, shape and location of adenocarcinoma in first portion of the duodenum.

invaded the underlying tissue. The interglandular tissue is congested and in some areas there is diffuse infiltration with leukocytes (fig. 3). The diagnosis is papillary adenocarcinoma of the duodenum.

These sections were submitted to Dr. Whitmore, Professor of Pathology at Georgetown University, and Dr. Choisser, Professor of Pathology at George Washington University. Both agreed that the tumor was an adenocarcinoma arising in the duodenal papilloma.

COMMENT

The duration of the symptoms in this case certainly point toward a benign lesion. Hoffman and Pack[4] found that the average duration of life after the onset of symptoms of cancer of the duodenum is 7 months. The type of tumor also indicates that it was originally a benign lesion. Apparently adenomatous polyps of the duodenum must be considered in the same light as those in the colon. They are potentially malignant. The second interesting point in this case was the abrupt change in the symptom complex. The sudden increase in severity of the pain and the appearance of blood in the stomach and bowel tract may indicate that a change in the nature of the tumor had occurred.

The patient has had regular monthly examinations in the out-patient clinic since his operation. He is symptom-free, and there are no signs of recurrence. Since the malignant changes were considered to be early and well circumscribed, we believe that the local excision of the tumor will prove to be sufficient for a permanent cure.

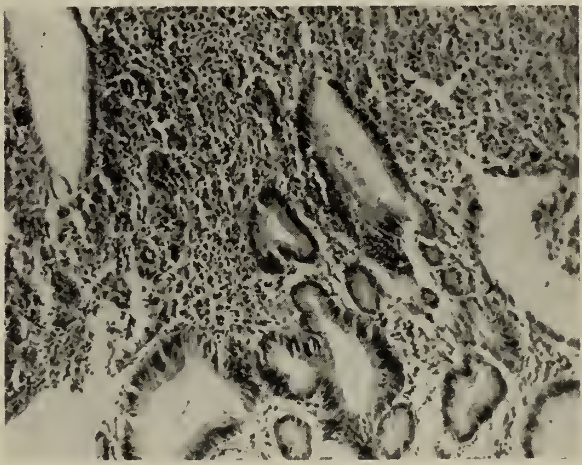

FIG. 3. Microphotograph of section of adenocarcinoma arising in the duodenal papilloma (×300).

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Say peptic ulcers will heal without the use of alkalis. The healing of gastric and duodenal ulcers will progress satisfactorily without the attempted neutralization of gastric acidity with alkalis, GEORGE F. DICK, M.D., AND C. WESLEY EISELE, M.D., Chicago, declare in *The Journal of the American Medical Association* for January 3, 1942, in a report on a series of 41 patients.

"Under hourly treatment with milk and cream without the use of alkalis," they say, "the speed of healing of gastric and duodenal ulcers compares favorably with that under other methods of treatment. Such treatment of a series of 41 patients brought about (1) the prompt disappearance of symptoms and the complete comfort of the patient, (2) the disappearance of . . . blood from the stool when such was present and (3) the disappearance of the X-ray crater."

The two physicians explain that ulcer treatment without alkalis is not new and that their report confirms the findings of previous investigators.

"The use of alkaline substances in the management of peptic ulcer is almost universal, and such treatment is recommended in nearly all the current textbooks dealing with the subject," they say. "It is commonly assumed that complete neutralization of gastric acidity represents the ideal condition for ulcer healing, although no proof of this assumption exists. Furthermore, it is not certain that the highly alkaline stomach content obtained periodically in the course of alkali therapy is conducive to healing. That the conventional methods of treatment are not entirely satisfactory is manifest by the fact that scarcely a year passes without one or more new 'ulcer treatments' being advocated. At frequent intervals new kinds of neutralizing agents, supposedly with better virtues or fewer evils, are recommended."

In their series, 7 patients were suffering from gastric ulcers and 34 from duodenal ulcers. X-ray studies were used to determine the progress of the treatment. Seventy per cent of the craters of duodenal ulcers disappeared within 75 days. As others have noted, the authors say, complete relief of symptoms occurred in nearly all cases long before the crater disappeared. In 31 cases all symptoms were controlled within one week.

SUBACUTE BACTERIAL ENDOCARDITIS: Report of a Case Apparently Cured with Sulfanilamide

HERBERT ABRAMSON, M.D.
Washington

THE USE of sulfonamides in the treatment of subacute bacterial endocarditis has been reported upon enthusiastically by some authors and discouragingly by others. By recording the results in all cases it eventually will be possible to evaluate the effectiveness of any one or all of these drugs. In some hands none of these drugs seems to have been of value[1]; in others, one compound has been found to be better than the others, and still another group has concluded that each has value and that if one drug is chosen first and is found to be ineffective another may be tried.[2] Recently the sulfonamides have been used in conjunction with artificial heat therapy, typhoid vaccine, or heparin.[2, 3]

The following report is one of apparent cure of a proved case of subacute bacterial endocarditis with the use of sulfanilamide.

Report of Case

G. K., a white man, aged 49, was first seen at his home on May 21, 1940, complaining of a tired feeling in the afternoons of 2 weeks' duration. Prior to the onset of tiredness he had been energetic and felt well. For the preceding 5 days his oral temperature each afternoon had been 100°F. There were no other symptoms and no change in his weight. His family history was irrelevant. There was no past history of rheumatic fever or chorea.

The patient was a well developed and well nourished white man who did not look ill. His skin was suntanned, and he had no eruptions. A small petechia was present on the conjunctival surface of the right lower eyelid. The sclerae appeared muddy and the pupils, which were regular and equal, reacted well to light and accommodation. Ophthalmologic examination showed no abnormalities. Ears and nose were negative. The tonsils were small but a little injected, as was also the pharyngeal membrane. Gingivitis was present, but transillumination of the gums and apices of the teeth showed no evidence of infection. Examination of the heart revealed no palpable thrill, nor was there enlargement, arrhythmia or murmurs. The lungs were normal on palpation, percussion and auscultation. The liver descended 3 cm. below the right costal margin on deep inspiration, and the spleen was just palpable at the left costal margin. No abdominal tenderness, spasticity or masses could be elicited. The prostate gland and its secretion were normal. Neurologic examination was entirely normal.

Laboratory findings on the day the patient was first seen were as follows: The urine was normal except that the centrifuged specimen contained 3 to 5 red blood cells and 1 to 3 white blood cells in each high power field, with an occasional clump of pus and a granular cast. The red blood cells numbered 4,170,000 per cu. mm. of blood, and the hemoglobin was 82 per cent (Dare), the white blood cells numbered 7,200 per cu. mm. of blood with 70 per cent segmented forms, 5 per cent band forms, 3 per cent myelocytes, 1 per cent eosinophils, 20 per cent lymphocytes, and 1 per cent monocytes.

From the above findings subacute bacterial endocarditis was suspected, and the patient was hospitalized. A blood culture taken on the sixteenth day after the onset of the present illness was negative. Agglutination tests for typhoid, paratyphoid A and B, tularemia, undulant fever, and typhus were either negative, or positive in dilutions of 1 to 20 only, which were of no diagnostic significance. The Kahn and Wassermann tests were negative. A roentgenogram of the chest and intravenous pyelograms were negative. The temperature was elevated to 101.6°F. rectally on May 25 and thereafter fluctuated between 99.6°F. and 103.4°F. A second blood culture taken on May 25 showed nonhemolytic streptococci in the blood broth 2 days later, which on the blood plate was identified as a pure culture of Streptococcus viridans. A subsequent culture made 6 days later (June 1) by another laboratory also showed the same organism in pure culture. On June 4 a third culture showed similar results.

Sulfanilamide was started on the eighteenth day of illness (May 28). The dose was 15 grains (1 Gm.) every 4 hours (90 grains or 6 Gm. daily) for 2 days, after which it was increased to 20 grains (1.3 Gm.) every 4 hours (120 grains or 8 Gm. daily). A blood culture taken on the eleventh day after beginning sulfanilamide therapy was negative, and 7 other cultures taken on various dates during the next 3 months remained negative. Sulfanilamide was continued during this time uninterruptedly except for a period of 4 days, when because of gastroenteritis apparently due to contaminated food it could not be tolerated. The dose of sulfanilamide was regulated according to the blood level of the drug, an effort being made to keep the level as close to 15 mg. per 100 c.c. of blood as possible. Most of the drug levels were between 10 mg. and 14.8 mg. per 100 c.c. of blood. On one occasion the level was permitted to fall to 5 mg. because of a leukocyte count of 3,100 per cu. mm. of blood. Transfusions were given only to help restore the blood cell values to normal. In all, 6 transfusions of citrated blood were given, 5 of 500 c.c. each and 1 of 250 c.c.

During the first 30 days of sulfanilamide medication the temperature usually reached a daily elevation of 101°F. rectally or over. However, after this time the temperature slowly but gradually decreased until it reached normal.

The heart during this period of illness developed a soft short mitral systolic murmur, heard best with the patient lying on his left side. This occurred a little less than a month after the onset of illness, persisted for several weeks, and then disappeared.

Two electrocardiograms were made. The first, made on May 31, showed a prolonged PR interval of 0.28 second with slurring of the QRS in leads III and IV-F. The second, made on July 30, showed a shortening of the PR interval to 0.23 second.

Sedimentation index determinations (Wintrobe) were as follows: June 11, 30 mm., June 24, 18.5 mm., June 30, 12 mm., and August 13, 7 mm.

After 84 days of sulfanilamide therapy the drug was discontinued. The patient has been examined several times since his discharge from the hospital on August 18, 1940, and has been found normal in every respect. Up to this writing he is apparently cured by clinical and laboratory examination.

SUMMARY AND CONCLUSIONS

An apparently cured case of subacute bacterial endocarditis is presented in which there were 3 positive blood cultures of Streptococcus viridans, fever, hematuria, petechiae, splenomegaly, and a heart murmur.

The following factors may be important in producing a cure: (1) early diagnosis, (2) early institution of chemotherapy, (3) a high blood concentration of the drug, and (4) prolonged administration of the drug.

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Say other treatments for erysipelas made obsolete by sulfonamide drugs. The prompt response of erysipelas to sulfanilamide or one of its derivatives makes this the treatment of choice and renders other treatment measures obsolete, Robert E. Shank, M.D., Richard W. Maxwell, M.D., and George S. Bozalis, M.D., St. Louis, declare in the J. A. M. A. for December 27, 1941, in a report on the results they obtained in so treating 165 patients with this disease.

Erysipelas is a common bacterial infection of the skin caused by the hemolytic streptococcus. It is characterized by intense itching, burning and inflammation of the skin, which is swollen and painful. The condition is contagious. The authors explain that prior to the introduction of sulfanilamide, methods of treating the disease were notably unsatisfactory. Describing the results they obtained with their patients, they say:

"In no instance was the lesion ever seen to spread after the first thirty-six hours on chemotherapy. A small subcutaneous abscess was the only complication. There were no recurrences.

"In 84 patients an elevated admission temperature had returned to normal after twenty-four hours and remained normal. In 16 cases fever persisted over forty-eight hours but in no instance longer than four days.

"Sulfanilamide was found to be fairly toxic, particularly for the aged patients in this series. The new drug sulfabenamide, used experimentally for 34 patients, produced equally good results, without the usual toxic effects so common to the sulfonamide group of drugs. . . .

"There were 5 deaths in the group of 165, a mortality figure of 3 per cent. This compares with mortality rates of from 8 to 12 per cent before the use of sulfanilamide. . . . Patients over 60 years of age, with chronic heart and kidney disease, furnished 4 of the 5 fatalities among this group."

President's Page

CONSERVATION OF MEDICAL MANPOWER

In this issue of the Medical Annals there appears an editorial entitled, "Civilian Medical Needs in Washington." The thoughtful reader of this editorial can come to no other conclusion than that the people of the District of Columbia will, in the near future, have to get along with fewer doctors. They will have to adjust themselves to a situation where each physician will have many more patients under his care and of necessity will have to conserve his energies for those who are in real need of his services. As a matter of fact, conditions have already reached a point where the public should be made aware of the changes that are to come.

For some time I have felt that the people of this community should be requested not to call physicians at all times of the night unless absolutely necessary. Most general practitioners in Washington are overwhelmed with duties they must perform, not only in connection with their own work but with defense projects. It would add greatly to their efficiency if they were given an opportunity to obtain much needed rest. This fact, I believe, should be called to the public's attention.

Another step which may have to be taken when the number of physicians is reduced to a point where they cannot make the necessary calls, is to concentrate patients in hospitals where it is more convenient to see them. This, of course, is not feasible at the present time because there are not enough hospital beds. However, if efforts now being put forth to obtain essential hospital facilities are successful, the above suggestion would seem to offer assistance in meeting the demands which will be made on the medical profession.

These are just two of many methods which will undoubtedly be adopted when we begin tightening our belts for a last ditch fight with the enemy. It is not too early to act and I am recommending that plans be made now for eventualities.

Henry R. Schreiber

Editorials

CIVILIAN MEDICAL NEEDS IN WASHINGTON

Washington has become the mecca of job seekers. It seems to us who live in the Nation's Capital that all the unemployed in the country look upon our city as the promised land. As a result of the vast mushrooming of Government bureaus in connection with the national defense program, Washington is thronged with Government employees and would-be workers as never before in its history. A majority of those who come here have no difficulty in obtaining employment for the demand for personnel of all kinds seems limitless. In the wake of this influx there have arisen many serious problems. Home building has boomed as never before, but housing for the thousands of low-salaried workers is woefully inadequate. In consequence, living conditions for many are far from good and in some instances deplorable. Traffic is so heavy that driving an automobile is a hazardous experience. Both private and public health facilities are overburdened to a point where the safety of the community is threatened.

Because of the continuous stream of arrivals in Washington, it is difficult to ascertain the facts regarding the number of people now living in the metropolitan area. Several estimates have been made, among which that of the Board of Trade would seem as reliable as any. On November 1, 1941, the Board determined that there were 1,057,000 persons in the metropolitan area. It has been estimated that about 10,000 workers and their families have come to Washington each month since that time. If these figures are accepted, the population is approximately 1,077,000.

While there is no way to be certain until the survey which is contemplated has been made, the best available data indicate that the number of physicians now in active practice in the District is as follows:

White physicians	844
Colored physicians	169
Physicians in the metropolitan area outside the District (Maryland and Virginia)	100
Total	1,113

Not included in the above figures are physicians employed by the Government, a majority of whom are not licensed in the District, those employed full-time by private organizations, those in the military services, and retired and disabled physicians.

On the basis of an estimated population of 1,077,000, there is at present approximately one physician for each one thousand persons. To date, 71 members of the Medical Society of the District of Columbia and 8 members of the Medico-Chirurgical Society have been called to active military duty. This number is increasing daily. Herein lies a threat to the health of the community.

It was recently announced in the press that District officials expect an additional 250,000 workers and their families will come to Washington during the current year. Crowded as the city now is, one can only conjecture what the situation may be if this happens. Although it is hoped that the transfer of some Government agencies to other cities will help to relieve conditions, the number of employees removed will be relatively small. Under these circumstances, the danger of an epidemic cannot be minimized. It is inevitable that the number of physicians per thousand population will be reduced to the absolute minimum because our fighting forces must have an adequate supply of doctors. However, those responsible for the safety and welfare of our citizens cannot overlook the fact that in a city as congested as Washington, the situation is potentially more dangerous than in other urban centers.

In view of these facts, the danger of drastically reducing the number of physicians in private practice and the number of residents and interns in hospitals in the District is apparent. It is to be hoped that the local committee of the Procurement and Assignment Service which is being organized will take immediate steps to determine the number of physicians that will be needed in Washington. The committee is to be headed by Dr. F. X. McGovern, who is State Chairman of the Committee on Medical Preparedness. A heavy responsibility rests upon Dr. McGovern and members of his committee, for the health and welfare of the community will depend a great deal upon their conclusions.

MEDICAL COSTS AND REHABILITATION

Completion of the Cost Study of Rehabilitation of Selective Service Registrants in the District of Columbia was announced in the January issue of the MEDICAL ANNALS. It was further stated that the study was a joint effort of the Committees on Military Affairs of the Medical Society of the District of Columbia and the District of Columbia Dental Society, the American Red Cross, the Health Security Administration and the Medico-Chirurgical Society, Inc., of Washington, and that it would be released for publication in the near future.

Permission was recently given the ANNALS to publish a report on the study, which was submitted by the above organizations to Mr. William E. Leahy, Director of Selective Service in the District. It appears on pages 73–77 of this issue.

Although limited in scope, the study is revealing. The fact that 51 per cent of the registrants interviewed stated that they were willing to have their defects remedied so that they might enter the military services came as a surprise, and needless to say, a gratifying one. Interviewers were instructed to inform registrants that they were not compelled to sign a waiver, and were to do so entirely on a voluntary basis. And this was several weeks before Pearl Harbor!

It will be noted that all physical and dental examinations and interviews were completed on the evening of October 30, 1941 in three and one-half hours. Despite the speed with which the investigation was carried through, the report discloses that it was thorough. Its primary purpose was, of course, to ascertain the costs of treating remediable physical defects. In this respect, it has been most helpful to Selective Service officials charged with the development of the rehabilitation program.

Although similar studies were to have been made in different parts of the country, they have not been completed. The cost study in the District is therefore the first of its kind.

Members of the Medical Society will find this material of particular interest in view of the fact that the rehabilitation program will soon become a reality. As is generally known, treatment is to be given by physicians and dentists in private practice. Detailed information regarding the program will undoubtedly be released shortly.

PERTINENT PARAGRAPHS

January Meetings

As was pointed out last month, some boards and committees did not suspend their meetings during the holidays; others carried on without formal sessions. Before long the Society's program will again be in full swing. Committees in charge of the 1942 Annual Scientific Assembly will be especially active.

The following meetings were held in January:

January 2	Committee on Military Affairs Executive Board
January 7	Business Meeting of Society
January 12	Committee on Military Affairs
January 13	Board of Censors
January 14	Scientific Meeting of Society
January 16	Committee on Radio Education
January 21	Scientific Meeting of Society
January 26	Executive Board
January 28	Committee on Public Policy Scientific Meeting of Society

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"More Conversation and Less Action"

Our lawmakers not infrequently provide the public with comic relief. We should perhaps be grateful for a touch of humor in such troublous times as these. However, the melancholy thought intrudes that it is often unintentional and reflects only too clearly the mediocrity of the individuals involved.

Not long ago a Congressional committee devoted its attention to the health situation in Washington. The discussion, as so often happens, veered far afield. Reference was made to matters which had no relation to the subject at hand, mentioned only to impress constituents "back home." Following one such excursion, a lawmaker came forward with this observation: "I find more conversation and less action (in the District of Columbia) than any other place in the United States," to which the health official who was a witness replied, "That has been my experience."

The lawmaker saw nothing ludicrous about his statement but those who were privileged to listen in did. If there is too much talking in the District, certainly Congress is not out of the running. It is another case of "the pot calling the kettle black."

★

Medicine Not a Commodity

Most physicians have been only too well aware of the critical attitude of the public toward the medical profession. Reasons advanced for this have been numerous. Recently, in an address before the Rocky Mountain Medical Conference, Dr. Frank H. Lahey, President of the American Medical Association, commented on this situation as follows:

> "Why do the newspapers so like to criticize organized medicine? Why do we have some of the difficulties that we have with business, politicians, sociologists, with social workers, and so on? I believe there is a very logical and natural explanation as to why this does occur. It is a lack of understanding that I feel almost unable to overcome between medicine and those who spend their lives in industry, finance, manufacture, and so on. Someone in Kansas wrote an article which explains it better than anything else. The thought expressed is that you cannot treat medicine as a commodity, and if you begin to treat medicine as a commodity, you then begin to reason with an unsound foundation structure and it is due to the fact that sociologists, economists, social workers tend always to discuss and debate medicine in terms of its being a commodity. It is not a commodity and can never be a commodity. The basic thing that you must remember about medicine that makes it different from business is that medicine competes *never* in terms of price; it competes solely in terms of quality. Price competition does not exist in medicine; quality competition is the thing that makes medicine so pleasant to you and me. It is not the competition as to who can manufacture the article of medicine, whatever branch it be, for the least amount; it is who can do it best, and the one who gets to the top largely is the one who surpasses in quality and not in the matter of price competition. That is the thing that we find so difficult to make clear in lay minds.
>
> "You and I who have grown up in medicine understand this. It is the reason we practice medicine. It is

the explanation of why we work long hours, of why we have no interest in limitation of hours, of why we do our charity quietly and not blatantly, and the explanation of why we are shy of publicizing our charity. We do it not because we wish to advertise our profession, but because we get the inward pleasure and satisfaction that is impossible to explain, without being unduly sentimental, to the man who works daily largely in terms of accumulating wealth."

★

Planning for the Future

It is not too early to begin thinking of postwar conditions in relation to medicine. At least that is the attitude taken by the British Medical Association which several months ago established a Medical Planning Commission that is not only studying present health services but also the manner in which they should be provided in the future. A review of the work of the Commission to date, as reported in the *British Medical Journal,* appears in the current issue of *Medical Care,* a journal devoted to the "economic and social aspects of health service."

It appears that sharp differences of opinion have arisen over the personnel of the Commission, general practitioners claiming that there is insufficient representation of their group. The charge is also made that young men and women physicians have been excluded. Other critics complain that large cities are overrepresented while practitioners in small towns and country districts have only a handful of Commission members.

The same issue which has been the subject of much controversy in this country has also arisen in Great Britain, namely, that of state medicine. According to the article, "So far as can be judged from the (British Medical) *Journal,* majority opinion among British physicians supports the officially adopted policy of the British Medical Association advocating extension of the National Health Insurance Act in its medical scope and in the population covered; a further expansion of public health services and of governmental support and regional organization of all hospitals. A substantial, though probably a minority, section of medical opinion in Britain advocates that medical service to the whole population should be organized under government."

While the situation in the United States is not analogous to that in Great Britain, it would seem that it is not too early for organized medicine to begin thinking about the future and the problems which will undoubtedly confront the medical profession after the war.

★

More Rationing Certain

It appears only a matter of time until more commodities will be rationed. Already what was formerly known as the Tire Rationing Board of the District of Columbia has been designated the State Rationing Board. Included among its duties is that of rationing automobiles, the sale of which was stopped on January 1. Physicians are included among those who will be privileged to purchase automobiles as well as tires.

In regard to the purchase of tires, inquiries have been received at the Medical Society's office from physicians who wish to ascertain what requirements they must fulfill to obtain preferment. The first is that the physician must be in the active practice of medicine in the District. He must show that his tires are worn to such an extent that they cannot be repaired, recapped or retreaded. This requirement has been modified somewhat because of the local situation.

Physicians who cannot obtain the necessary repairing, recapping or retreading without "inordinate delay" and who can furnish proof of this, will be given certificates entitling them to purchase tires anywhere in the United States. This latter provision was adopted because tire repair shops in the District are completely swamped and a physician might conceivably be placed in a position where he could not render service to the sick unless he were given the privilege of purchasing tires elsewhere.

There has been another change in tire rationing. Prior to January 20, any person holding an "A-3 or higher preference" for new rubber tires, casings or tubes, who could demonstrate that his tires were used in the preceding six months to the extent of 75 per cent or more in work done for the Army or Navy of the United States, was entitled to new tires. On the above date, this regulation was rescinded. No longer will officers in the military services or other volunteers doing war work be eligible for tires. This rule, of course, does not affect physicians except those who are military officers and not engaged in active practice.

Physicians needing new tires should make application to either one of the following inspection stations: West Virginia and Central Avenues, N.E., and 10th and F Streets, S.W., where tires will be inspected and application forms provided.

Rationing of automobiles will begin on February 2, 1942. At the time this is written, the local board has not received its instructions. Mention should be made, however, of the fact that physicians having more than one car will not be provided with new tires until those on both cars are worn beyond repair. Undoubtedly the same ruling will apply to the sale of new automobiles.

★

A Doctor Becomes Governor

So few physicians are prominent political figures that Governor Robert O. Blood of New Hampshire, the only doctor-governor in the Nation, naturally has attracted wide attention. Although his duties as Governor make severe demands upon his time, he manages to carry on his practice. Frank Carey, of the Associated Press, writes "that the Governor can make rapid interchange between the toga of government and the surgeon's gown without apparent effect either on his executive demeanor—or his bedside manner."

Governor Blood is credited with being an able executive as well as a competent surgeon. "There's nothing in the doctor's study books that helps one to be governor," he says, "but medical training gives understanding in organization which is invaluable, and a doctor's life gives one a knowledge of people and an understanding of the way they react to things that are helpful in civic life."

According to Mr. Carey, Governor Blood began his career as a country doctor, which undoubtedly accounts for his resourcefulness and his sympathetic understanding of the people of his state.

Medicine needs more physicians with the capabilities of Governor Blood.

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Progress of Periodic Health Examination Program

The first phase of the Periodic Health Examination Program is about concluded. In a communication addressed to the Society's membership on January 13, 1942, an examination form, together with two pamphlets—one entitled "Notes on the Periodic Health Examination for Physicians," and the other, "Protect Your Health," for distribution to the laity—were enclosed. Members were asked to notify the Society's office if they wished to be placed on a list of physicians who would make health examinations. On February 1, 94 returns had been received.

Before having the list typed for use by MEDICAL BUREAU and in the Society's office, the Committee on Public Health requests that a notice be published in the MEDICAL ANNALS requesting physicians who have not done so and who wish to be listed to notify the Society promptly.

Periodic health examination forms will be provided physicians at cost (75 cents per hundred). Twenty-five folders for distribution to the laity will be furnished gratis. Above that number they also will be sold at cost ($1.25 per hundred).

The next step in the program will be to publicize the examinations, endeavoring to obtain the coöperation of all public health agencies and civic groups in the District. Further details in regard to this undertaking will be published in future issues of the MEDICAL ANNALS.

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Interprofessional Conference Organized

Several months ago, the Medical Society approved the recommendation of the Executive Board that a Committee on Relations with the Pharmaceutical, Dental and Nursing Professions be created. Recently the Board authorized the inclusion of hospital representatives. At a meeting on December 15, 1941, it was decided to organize the Interprofessional Conference for the purpose of discussing mutual problems, with the understanding, however, that where matters of policy are concerned, they will be referred to the respective organizations.

Dr. R. Lomax Wells, Chairman of the Society's committee, was elected chairman of the Conference, and Mr. Theodore Wiprud, secretary. Members are: Dr. Karl Wood from the District of Columbia Dental Society; Mr. Irving A. Tennyson, Dean W. Paul Briggs and Mr. Raymond Watson from the District of Columbia Pharmaceutical Association; Misses Annabelle Peterson and Edith Beattie from the Graduate Nurses' Association; Mr. J. G. Capossela and Mr. George Macatee from the District of Columbia Hospital Superintendents' Association; and Drs. Wells, Valentine M. Hess, Thomas Bradley, Edward B. Kelly, Charles C. Aronstein and Mr. Wiprud from the Medical Society.

At previous meetings, members of the Conference have been guests of the Medical Society of the District of Columbia and the District of Columbia Dental Society. At the next meeting, the District of Columbia Pharmaceutical Association will be host.

A Historian Wanted

Usually there appears at the proper time and place some one individual who is particularly well qualified for an important task. This is as true in the history of organizations as it is of nations. Such a man was Dr. J. M. Toner, a distinguished Washington physician who, in an address before the Medical Society of the District of Columbia on September 26, 1866, on the occasion of the forty-ninth anniversary of its formation, reviewed the history of the Society. His address was the result of laborious research and was the inspiration for the appointment many years later of a committee charged with the responsibility of preparing a history of the Medical Society from its organization in 1817 to 1909. Members of the committee which completed the work Dr. Toner began were Drs. D. S. Lamb, C. W. Franzoni, G. Wythe Cook, R. T. Holden, Sr., and Llewellin Eliot.

Surprisingly, the history is still in demand, although thirty-three years have passed since its publication. The world has undergone revolutionary changes in the intervening period and medicine, along with other services, has made great strides forward. Certainly there is an exciting story to be recorded of the Society's activities and its important figures from 1909 to 1942. The question is, who will do it? Physicians who undertake the task must possess patience and perseverance for it is indeed a labor of love.

SUBSCRIBE NOW

Physicians who are not subscribers to Group Hospitalization may now secure coverage effective March 1 if they will apply at the Society's Office or call District 3111. Applications from new members should reach Mr. Theodore Wiprud, Group Treasurer, by February 25.

War Section

PROCUREMENT AND ASSIGNMENT OF PHYSICIANS*

All inquiries concerning The Procurement and Assignment Service should be sent to The Executive Officer, 5654 Social Security Building, 4th and Independence Avenue, S. W., Washington, D. C., and not to individual members of the Directing Board or of committees thereof.

I. MEDICAL STUDENTS

A. All students holding letters of acceptance from the Dean for admission to medical colleges and freshmen and sophomores of good academic standing in medical colleges should present letters or have letters presented for them by their deans to their local boards of the Selective Service System. This step is necessary in order to be considered for deferment in Class II-A as a medical student. If local boards classify such students in Class I-A, they should immediately notify their deans and if necessary exercise their rights of appeal to the Board of Appeals. If, after exhausting such rights of appeal, further consideration is necessary, request for further appeal may be made to the State Director and if necessary to the National Director of the Selective Service System. These officers have the power to take appeals to the President.

B. Those junior and senior students who are disqualified physically for commissions are to be recommended for deferment to local boards by their deans. These students should enroll with the Procurement and Assignment Service for other assignment.

C. All junior and senior students in good standing in medical schools, who have not done so, should apply immediately for commission in the Army or the Navy. This commission is in the grade of Second Lieutenant, Medical Administrative Corps of the Army of the United States, or Ensign H. V. (P) of the United States Navy Reserve, the choice as to Army or Navy being entirely voluntary. Applications for commission in the Army should be made to the Corps Area Surgeon of the Corps Area in which the applicant resides and applications for commission in the Navy should be made to the Commandant of the Naval District in which the applicant resides. Medical R.O.T.C. students should continue as before with a view of obtaining commissions as First Lieutenants, Medical Corps, upon graduation. Students who hold commissions, while the commissions are in force, come under the jurisdiction of the Army and Navy authorities and are not subject to induction under the Selective Service Act. The Army and Navy authorities will defer calling these officers to active duty until they have completed their medical education and at least 12 months of internship.

II. RECENT GRADUATES

Upon successful completion of the medical college course, every individual holding commission as a Second Lieutenant, Medical Administrative Corps, Army of the United States, should make immediate application to the Adjutant General, United States Army, Washington, D.C., for appointment as First Lieutenant, Medical Corps, Army of the United States. Every individual holding commission as Ensign H. V. (P), U. S. Navy Reserve, should make immediate application to the Commandant of his Naval District for commission as Lieutenant (J.G.) Medical Corps Reserve, U. S. Navy. If appointment is desired in the grade of Lieutenant (J.G.) in the regular Medical Corps of the U. S. Navy, application should be made to the Bureau of Medicine and Surgery, Navy Department, Washington, D. C.

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* Recommendations prepared by the Procurement and Assignment Service for the information of physicians, with reference to the national emergency.

III. Twelve Months Interns

All interns should apply for a commission as First Lieutenant, Medical Corps, Army of the United States, or as Lieutenant (J.G.), United States Navy or Navy Reserve. Upon completion of 12 months internship, except in rare instances where the necessity of continuation as a member of the staff or as a resident can be defended by the institution, all who are physically fit may be required to enter military service. Those commissioned may then expect to enter military service in their professional capacity as medical officers; those who failed to apply for commission are liable for military service under the Selective Service Acts.

IV. Hospital Staff Members

Interns with more than 12 months of internship, assistant residents, fellows, residents, junior staff members, and staff members under the age of 45, fall within the provisions of the Selective Service Acts which provide that all men between the ages of 20 and 45 are liable for military service. All such men holding Army commissions are subject to call at any time and only *temporary deferment* is possible, upon approval of the application made by the institution to the Adjutant General of the United States Army certifying that the individual is temporarily indispensable. All such men holding Naval Reserve commissions are subject to call at any time at the discretion of the Secretary of the Navy. Temporary deferments may be granted only upon approval of applications made to the Surgeon General of the Navy.

All men in this category who do not hold commissions should enroll with the Procurement and Assignment Service. The Procurement and Assignment Service under the Executive Order of the President is charged with the proper distribution of medical personnel for military, governmental, industrial, and civil agencies of the entire country. All those so enrolled whose services have not been established as essential in their present capacities will be certified as available to the Army, Navy, governmental, industrial, or civil agencies requiring their services for the duration of the war.

V. All Physicians under Forty-five

All male physicians in this category are liable for military service and those who do not hold commissions are subject to induction under the Selective Service Acts. In order that their service may be utilized in a professional capacity as medical officers, they should be made available for service when needed. Wherever possible, their present positions in civil life should be filled, or provisions made for filling their positions, by those who are (a) over 45, (b) physicians under 45 who are physically disqualified for military service, (c) women physicians, and (d) instructors and those engaged in research who do not possess an M.D. degree whose utilization would make available a physician for military service.

Every physician in this age group will be asked to enroll at an early date with the Procurement and Assignment Service. He will be certified for a position commensurate with his professional training and experience as requisitions are placed with the Procurement and Assignment Service by military, governmental, industrial or civil agencies requiring the assistance of those who must be dislocated for the duration of the national emergency.

VI. All Physicians over Forty-five

All physicians over 45 will be asked to enroll with the Procurement and Assignment Service at an early date. Those who are essential in their present capacities will be retained and those who are available for assignment to military, governmental, industrial or civil agencies may be asked by the Procurement and Assignment Service to serve those agencies.

The maximal age for original appointment in the Army of the United States is 55. The maximal age for original appointment in the Naval Reserve is 50 years of age.

A COST STUDY OF REHABILITATION OF SELECTIVE SERVICE REGISTRANTS IN THE DISTRICT OF COLUMBIA

In August 1941, the Medical Advisory Council to National Headquarters of Selective Service requested the Medical Society of the District of Columbia to undertake a study of the probable costs involved in correcting certain remediable diseases and defects found in local Selective Service registrants, which if corrected would qualify them for military service.

It was indicated that similar studies would be made in a number of other communities of the country, from which final estimates could be prepared for a national physical rehabilitation program of Selective Service registrants.

Such a program would obviously have to be limited to the correction of diseases and defects that are definitely of a remediable character. Hernias, hemorrhoids, minor orthopedic defects, dental defects, diseased tonsils, underweight and overweight are examples.

The proposed cost study for the District was carefully considered by the Committee on Military Affairs and the Executive Board of the Medical Society and approved subject to the assurance that funds would be available and that the services of Health Security Administration (H.S.A.) could be secured to help organize the project and to analyze the statistical data collected. The plan was also presented to the Executive Committee of the District Dental Society and approved on a similar basis.

A number of conferences were held by representatives of the Advisory Council to National Headquarters of Selective Service, District Selective Service, the Medical Society of the District of Columbia, the District of Columbia Dental Society, the Medico-Chirurgical Society of Washington, H.S.A. and the American National Red Cross. The Red Cross had, through previous conferences with representatives of the Selective Service System and H.S.A., agreed to give a limited sum of money for the study, provided a joint project could be agreed upon. This was done and a program developed in which all the agencies mentioned assumed certain definite responsibilities.

The general plan of the project is outlined in the statement prepared by the Secretary of the Medical Society entitled, "Plan of Rehabilitation Study in the District of Columbia of Remediable Defects of Selectees." The first three paragraphs of this statement read as follows:

"At the request of General Lewis B. Hershey, Director of the Selective Service System, the Director of Selective Service of the District of Columbia has agreed to conduct a rehabilitation cost study in the District with the assistance of the American National Red Cross, the Medical Society of the District of Columbia, the District of Columbia Dental Society, and Health Security Administration.

"The purpose of this study is to ascertain the costs of providing medical and dental care for selectees with remediable physical defects. It is proposed that twenty to thirty selectees whose defects can be remedied, shall be chosen from each local board for this study.

"Since it is desired to have a rehabilitation cost estimate of selectees whose defects can be corrected in a short period, only selectees in Class 1-B will be included in this survey."

The Committee on Military Affairs of the Medical Society of the District of Columbia, with the assistance of the District Selective Service, the Executive Committee of the District Dental Society, H.S.A. and the American Red Cross, worked out a plan of procedure for the reëxamination of a certain number of registrants, whose defects appeared to be of a remediable character, for making a cost estimate of correcting these defects and for analyzing the statistical data collected.

Procedure Adopted

Progressive steps in the plan of procedure were as follows:

1. District Selective Service sent notices to 625 registrants classified as 1-B, requesting them to report for a reëxamination, Thursday evening, October 30. Two hundred and twenty-eight registrants were asked to report at Georgetown Hospital, 174 at Garfield Hospital and 223 at Sibley Hospital. Of these, 477 were white and 148 colored. Between 20 and 30 names had been selected from the files of each of the 25 boards in the District. The registrants selected therefore represented a cross-section

of the various social and economic population levels in the District of Columbia. The physical examination records indicated that their defects were of a remediable character.

2. The State Medical Officer of the District Selective Service appointed a number of physicians and dentists to make the examinations, selected from the membership of the Medical Advisory Boards and the local examining physicians. Records of the physical and dental defects reported by the local boards were available to the examiners. They were asked to compare their findings with these records, to indicate whether the defect found appeared to be remediable and what type of treatment was necessary—medical, surgical or dental. They were also asked to indicate what supplementary services were necessary, such as number of days of hospital care, X-ray examinations, general or local anesthetic, special appliances, supplies, etc. The cost estimates were not made by the examiners, but by H.S.A. under the direction of the Committee on Military Affairs of the Medical Society and the Executive Committee of the Dental Society. Special forms, together with written instructions, and clerical assistance were provided to assist the physicians and dentists in recording the findings and data.

3. After the physical and dental examinations were completed, the registrants were referred to interviewers for questioning as to their economic status and attitude toward physical rehabilitation. The interviewers were all trained social service or medical social workers, most of whom were employees of H.S.A. Special forms and clerical assistance were provided to assist in recording the statements and data. The interviewers first asked the registrants if they were willing to have their defects corrected, even though such correction implied induction into military service. Those who answered in the affirmative were then requested to sign a waiver indicating their willingness to submit to physical rehabilitation and to have their personal health and medical problems referred to a rehabilitation agency.

The registrants were also questioned as to their ability to pay for the corrective work, but no subsequent investigations were made to verify their statements. Only the registrants' answers to these questions were recorded. This would obviously not give a true picture of the actual number who need assistance.

The physical and dental examinations and the interviews were all completed between the hours of 7 and 10:30 p.m. on October 30. An effort was made to provide sufficient personnel of all types necessary so that the work could be performed in record time. As could be expected under such circumstances, some of the blanks were not properly filled in. It was therefore not possible to make a cost estimate of every registrant who reported for the examination. Some of the registrants left the hospital as soon as the examinations were completed, before they were questioned by the interviewers.

The completed forms were turned over to H.S.A. for study and statistical analysis. The actual count showed that 548 registrants reported for the physical and dental examinations, 418 white and 130 colored. Of 491 questioned by the interviewers, 249 (51 per cent) signed waivers, thereby indicating their willingness to submit to physical rehabilitation.

The fact that more than half of the registrants interviewed signed the waiver provided the biggest surprise of the entire project. It was generally taken for granted that the majority of the registrants would be unwilling to have their defects corrected if it implied induction into military service. On the contrary, the majority did not seem reluctant to enter the service.

Many of the registrants indicated that they wanted to get into the service. Some hesitated, not because they wished to escape military duty, but because there was no opportunity to consult with members of the family. They were not prepared to make a decision one way or the other, without some deliberation. Only a small number, perhaps a dozen, were displeased and grumbled about this method of procedure.

We believe this response was genuine. The interviewers were instructed to inform each registrant that they were not compelled to sign the waiver but that they must do so entirely on a voluntary basis. The result is for that reason all the more gratifying.

Analysis of Data

Cost estimates were made for 386 registrants (table 1), of whom 348 had only one defect, either medical, surgical or dental, and 38 had more than one. Some had two defects, both requiring surgical treatment or one medical and one surgical or one dental and medical or surgical. One had three defects. A separate cost estimate was made for each defect to be corrected.

TABLE 1

Physical Defects and Treatment Indicated

	NUMBER OF REGISTRANTS		
	White	Colored	Total
One Surgical			
Hernia (unilateral)	53	30	83
Hernia (bilateral)	5		5
Deviated Septum	15		15
Varicocele-Hydrocele	22		22
Undescended Testis	4		4
Pilonidal Cyst	5	1	6
Ear (plastic)		1	1
Varicose Veins	9	2	11
Tonsil		1	1
Hemorrhoids	1	2	3
Subtotal One Surgical	114	37	151
Two Surgicals			
Hernia & Pilonidal Cyst	1		1
Hernia (bilateral) and Hemorrhoid	1		1
Hernia (bilateral) and Circumcision	1		1
Hernia (unilateral) and Hemorrhoid		1	1
Hernia & Varicocele	2	3	5
Hernia & Deviated Septum	2		2
Varicocele & Orthopedic	1		1
Pilonidal Cyst & Orthopedic	1		1
Varicocele & Varicose Veins	1		1
Tonsil & Deviated Septum	1		1
Tonsil & Hemorrhoid	1		1
Hernia & Orthopedic	1		1
Hernia (bilateral) and Orthopedic	1		1
Subtotal Two Surgicals	14	4	18
Surgical & Medical			
Hernia & Underweight	3		3
Tonsil & Underweight		1	1
Orthopedic & Underweight	1		1
Subtotal Surgical & Medical	4	1	5
Medical			
Skin	2		2
Underweight	60	9	69
Overweight	3	2	5
Subtotal Medical	65	11	76
Orthopedic	14	7	21
Dental & Medical or Surgical			
Dental & Hernia (unilateral)	3		3
Dental & Deviated Septum	3		3
Dental & Polyps	1		1
Dental & Undescended Testis		1	1
Dental & Tonsil	1		1
Dental & Underweight	5		5
Dental, Underweight & Tonsil	1		1
Subtotal Dental & Medical or Surgical	14	1	15
Total	79	21	100
Grand Total	304	82	386

The estimates submitted in this report are based, with a few exceptions, on the fee schedule of the United States Veterans Administration. This schedule has been in effect for some time and provides not only for medical, surgical and dental fees, but also for items such as hospitalization, X-ray examinations, special laboratory tests, etc. It allows $5.00 for hospitalization in a private and $4.00 a day in a semi-private room. The $5.00 rate was used for the purpose of this study.

In a few instances in which certain types of corrective work were not included in the Veterans Schedule, the Committee on Military Affairs of the Medical Society designated a comparable fee.

Use of the Veterans Administration fee schedule as a basis for this cost study does not signify approval of this or any other fee schedule for the rehabilitation of registrants. No fee schedule has been adopted by either the Medical or Dental Societies for that purpose.

The cost estimates as given in the table of statistical analysis are so arranged that allowances for the per diem rate of hospitalization, X-ray examinations, anesthetics, medical and dental fees, can be readily changed to meet any requirements and the total cost estimates adjusted accordingly.

No allowance was made for extra costs arising out of certain complications that may develop, particularly in connection with surgical and dental treatments. That may be necessary to give a true picture of the total rehabilitation cost estimates.

It is difficult to give cost estimates for rehabilitating registrants who are underweight or overweight unless it is assumed that they will be placed in a camp or other institution where their dietary and personal hygiene can be carefully supervised by trained personnel. Based on the experience at C.C.C., N.Y.A., and Army camps, one is led to believe that temporary residence in a place of that character is the quickest, most effective, and most economical way of dealing with this problem.

Of the 386 registrants classified for rehabilitation, 271 have remediable medical or surgical diseases or defects only, 100 have remediable dental defects only, and 15 have medical or surgical as well as dental defects.

TABLE 2

Defects and Cost of Treatment to Effect 1-A Classification in 386 Registrants (304 White, 82 Colored)

	NUMBER OF CASES			DAYS OF HOSP. AT $5.00 DAY PER CASE	GENERAL ANESTHESIA	OPERATING ROOM	SURGEONS FEE	$2.00 OFFICE VISITS	APPLIANCES, ETC.	X-RAYS	DAYS AT CAMP AT 50¢	COST PER PATIENT	TOTAL COST
	White	Colored	Total										
Hernia (unilateral)	65	34	99	14	$10.00	$10.00	$75.00					$165.00	$16,335.00
Hernia (bilateral)	8		8	14	10.00	10.00	100.00					190.00	1,520.00
Deviated Septum	21		21	5	10.00	10.00	50.00					95.00	1,995.00
Varicocele-Hydrocele	26	3	29	7	10.00	10.00	50.00					105.00	3,045.00
Undescended Testis	4	1	5	21	10.00	10.00	100.00					225.00	1,125.00
Pilonidal Cyst	7	1	8	14	10.00	10.00	50.00					140.00	1.120.00
Ear (plastic)		1	1	21	10.00	10.00	50.00					175.00	175.00
Varicose Veins	10	2	12	2	10.00	10.00	60.00					90.00	1,080.00
Tonsil	4	2	6	2	10.00	10.00	35.00					65.00	390.00
Hemorrhoids	3	3	6	7	10.00	10.00	40.00					95.00	570.00
Polyp	1		1	2	10.00	10.00	25.00					55.00	55.00
Circumcision	1		1	2	10.00	10.00	15.00					45.00	45.00
Cost of Surgical	150	47	197										$27,455.00
Underweight	70	10	80								120	60.00	4,800.00
Overweight	3	2	5								120	60.00	300.00
Skin	2		2					40.00	8.00				48.00
Orthopedic	19	7	26	89	90.00	100.00	370.00	106.00	132.00	95.00			1,338.00
Dental	93	22	115										9,502.00*
	337	88	425										$43,443.00

* See table 3.

Unofficial reports indicate that the majority of malnourished young men can be brought within average weight limits for age and height in such camps in three or four months. We are informed that the present cost of food alone at these camps averages about 50 cents per day per person. The cost estimate was made on this basis, allowing four months' residence in a camp at 50 cents per day per person. No allowance was made for administrative and other costs.

The final estimates indicate that it will cost $43,443.00 (table 2) to correct all of the diseases and defects classified as remediable in 386 registrants (304 white, 82 colored), which if corrected would reclassify them in 1-A. This represents an average cost of $112.55 per person.

TABLE 3

Dental Defects and Cost of Treatment to Effect 1-A Classification of 115 Registrants (93 White, 22 Colored)

Appliances	$546.50
X-Rays	239.00
Prophylaxis	536.00
Extractions	371.00
Fillings	1,402.00
Partial Upper	2,730.00
Partial Lower	3,677.50
Total	$9,502.00

The total cost for correcting the remediable medical and surgical defects in the group of 271 registrants, plus the cost of correcting the medical and surgical defects in the group of 15, who also have dental defects, is $33,941.00, an average of $118.67 per person.

The total cost of correcting all remediable dental defects in the group of 100 registrants, plus the 15 who also have medical or surgical defects is $9,502.00 (table 3), an average of $82.63 per person.

Copies of all the forms used in this study project were submitted with this report.

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President Roosevelt has appointed Dr. George Baehr, Chief Medical Officer of the Office of Civilian Defense, to be a member of the Health and Medical Committee of the Office of Defense Health and Welfare Services. Dr. Irvin Abell, Louisville, Kentucky, Chairman of the Committee on Medical Preparedness of the American Medical Association, is Chairman of the Health and Medical Committee and other members are the Surgeon General of the U.S. Army, Major General James C. Magee; the Surgeon General of the U.S. Navy, Rear Admiral Ross T. McIntire; the Surgeon General of the U. S. Public Health Service, Dr. Thomas Parran; and the Chairman of the Division of Medical Sciences, National Reaserch Council, Dr. Lewis W. Weed, Baltimore. The Office of Defense Health and Welfare Services is a part of the Office for Emergency Management which in turn is part of the Executive Office of the President. The Director of the O.D.H.W.S. is Paul V. McNutt, who is also Federal Security Administrator.

RADIO PROGRAMS

National Defense Health Clinics, sponsored by the Medical Society's Committee on Radio Education, were suspended shortly before the holidays and were resumed on January 11. The Clinics originate at Station WOL, Washington, and are heard each Sunday afternoon from 3:45 to 4:00 o'clock over the nationwide network of the Mutual Broadcasting System. Speakers of national prominence have participated in these broadcasts as the following schedule shows.

January 11 "Medicine in the Americas"
    Dr. A. A. Moll, Secretary, Pan American Sanitary Bureau
    Rev. Edmund A. Walsh, S.J., Dean, School of Foreign Service, Georgetown University
    Hon. Dennis Chavez, United States Senator from New Mexico
January 18 "Health and Civilian Defense"
    Mrs. Franklin D. Roosevelt, Assistant Director, Office of Civilian Defense
    Mr. John B. Kelly, Assistant Director in charge of Physical Fitness Program, Office of Civilian Defense
    Dr. W. Palmer Dearing, Assistant Chief Medical Officer, Office of Civilian Defense
January 25 "President's Birthday Parties"
    Mr. Edward Arnold, President, Screen Actors' Guild
    Dr. Charles Armstrong, National Institute of Health
    Mr. Paul Lukas, star of "Watch on the Rhine"
    Lt. Comdr. John Ford, U.S.N., President, Motion Picture Directors' Guild
February 1 "Medicine Makes News"
    Dr. Morris Fishbein, Editor, *Journal of the American Medical Association*
    Mr. Fulton Lewis, Jr., Radio Commentator, Mutual Broadcasting System
    Mr. Watson Davis, Editor, *Science News Letter*

As in the past, Dr. Henry B. Gwynn, Chairman of the Committee on Radio Education, has been the moderator. It is largely due to his tireless efforts that the broadcasts have been possible.

WOMAN'S AUXILIARY NOTES

A tea was given by the Woman's Auxiliary to the Medical Society of the District of Columbia in the library of the Medical Society Building on Wednesday, January 14, 1942. Mrs. Caryl Burbank, the President, received the guests, assisted by the officers of the Auxiliary and Past Presidents.

Mrs. William L. Walters, President of the Woman's Auxiliary to the Dental Society of the District of Columbia, was guest of honor. Other guests included Miss Mabel T. Boardman of the American Red Cross, Major Julia O. Flikke of the Army Nurses Corps, Miss Sue S. Dauser, Mrs. Ross T. McIntire, Mrs. Robert E. Hoyt, Mrs. James C. Magee, Mrs. Shelby W. Marietta, Mrs. S. S. Adams, Mrs. Hugh S. Cumming, Mrs. Merritt W. Ireland, Mrs. Thomas Parran, Mrs. Walter Reed, Mrs. Charles Edward Riggs, Mrs. P. S. Rossiter, Mrs. William M. Sprigg, Mrs. Edward R. Stitt, Mrs. D. P. Hickling and Mrs. Cline N. Chipman.

The Ways and Means Committee is planning to present the Glee Club of Duke University, consisting of forty voices, at a concert to be held the latter part of March in the Medical Society's auditorium. The proceeds from the concert will be placed in the Educational Fund. Complete details will appear in the next issue of the MEDICAL ANNALS.

A First Aid Course, under the sponsorship of the American Red Cross, is being held each Tuesday and Friday morning in the Medical Society's Library. This class is very well attended, fifty-four members being enrolled.

MRS. E. LEONARD GOODMAN
Publicity Chairman

MEETINGS

Wednesday, March 4

BUSINESS MEETING

Wednesday, March 11

The Section on Pathology and Laboratory Medicine will present the following program:

"The Minimum Laboratory Procedures Essential to the Diagnosis of Blood Dyscrasias." GEORGE J. BRILMYER, M.D., Associate Professor of Pathology, Georgetown University School of Medicine

"The Importance of Laboratory Examinations in the Administration of the Sulfonamides." THOMAS M. PEERY, M.D., Assistant Professor of Pathology, George Washington University School of Medicine

"The Chemical and Cytological Changes in Spinal Fluid in Disease." LESTER NEUMAN, M.D., F.A.C.P.

"The Significance of Blood Protein and Nitrogen Variations." H. H. LEFFLER, M.D.

"Laboratory Examinations Essential in the Diagnosis of Obscure Fevers." LT. ALFRED GOLDEN, Medical Corps, U. S. A.

"Comparative Usefulness of Whole Blood and Plasma Transfusions." JANVIER W. LINDSAY, M.D., F.A.C.P.

Wednesday, March 18

The Syphilis Journal Club will present the following program:

"Syphilis Looks at the Doctor." NELS A. NELSON, M.D., former Director of Venereal Disease Bureau, State of Massachusetts

Sound—Color Film: "Syphilis: Its Diagnosis and Management"

Wednesday, March 25

HOUSE OFFICERS' NIGHT

This night is reserved for the presentation of papers selected as meriting prizes among those submitted by house officers in the District of Columbia.

Buffet Supper

MEMBERSHIP

The following applicants for membership were duly elected to membership at the business session, January 21, 1942:

Active Members

Catharine Birch, 1801 Eye Street, N. W.
J. Earl Kadan, 900 17th Street, N. W.
John Louzan, 1726 Eye Street, N. W.
James Patrick Lyons, 1003 East Capitol Street
George W. Russell, 4904 Georgia Avenue, N. W.
Joe Harold St. John, 1150 Connecticut Avenue, N. W.
Robert G. Taylor, 1150 Connecticut Avenue, N. W.

Associate Members

John H. Gilligan, 3407 N. 3rd Street, Arlington, Va.
Philip W. Huntington, 1335 H Street, N. W.
Solomon Katzenelbogen, 5921 Wilson Lane, Bethesda, Md.

Recent changes in membership status:

Active to Associate

Alfred H. Richwine

Resigned:
Active Members

M. H. Darnall
Edward Lee Howes

Associate Member

Walter Rapaport

Five New Life Members

Chapter II, Article IV, of the Constitution of the Society, reads as follows:

> Life members shall be active members who have been active members for a total of forty years. They shall have all of the privileges of active membership and shall be exempt from paying dues and assessments.

Our honor roll now numbers 61. The congratulations of the Society are extended to:

Seniority Number		Date of Membership
281	Frank E. Gibson	October 2, 1901
283	William A. Jack, Jr.	October 2, 1901
286	Thomas S. Lee	October 30, 1901
290	William P. Reeves	October 14, 1901
294	Edgar P. Copeland	October 17, 1901

who have for forty years been on the roster, meeting all dues and assessments and lending their support to the Society by frequent attendance. Their status is now elevated to Life Membership.

NEWS AND PERSONALS

House Officers' Night will be held on the evening of March 25. The scientific part of the program will consist of papers which have been selected by the Program Committee as the best among those submitted by house officers of the local hospitals. First and second prizes will be awarded and papers of merit will be given honorable mention. Three papers will be read. Since this is the first program of its kind which has been sponsored, a large turnout is expected. A buffet supper is to be served immediately following the scientific program.

The Section on Neurology and Psychiatry presented the following program on February 5: "Subacute Necrotic Myelitis," Dr. Daniel Jaffe, Resident in Neurology, Gallinger Municipal Hospital; "Insight into Psychotic Mechanisms and Emergency Psychotherapy," Dr. Frieda Fromm-Reichmann, Chestnut Lodge Sanitarium.

The Section on Gastroenterology has elected new officers as follows:

Dr. William Earl Clark, *Chairman;* Dr. Fred A. J. Geier, *Vice Chairman;* Dr. R. Sterling McGrath, *Secretary-Treasurer.*

Arguments were heard in the appeal of the **American Medical Association, et al.** to the District Court of Appeals on February 16.

The Georgetown University Alumni Association held its first scientific session of 1942 on January 12. Dr. Maxwell Meyer Wintrobe of Johns Hopkins University School of Medicine addressed the members on the subject, "The Management of Disorders Involving the Formed Elements of the Blood," following which discussion was led by Dr. Walter A. Bloedorn and Dr. Lester Neuman. There were between 200 and 250 alumni and other physicians present, and a buffet luncheon was served in the cafeteria following the scientific session.

The Washington Ophthalmological Society met February 2 at the Episcopal Eye, Ear and Throat Hospital. The guest speaker was Dr. A. B. Reese of New York City, who chose for his subject, "Ophthalmic Surgical Anatomy." Dr. G. Victor Simpson gave a case presentation on "Angiomatosis of the Retina (von Hippel's Disease, Lindau's Disease)." Case reports were presented by Drs. Sterling Bockoven, Everett Caldemeyer and Hector C. McKnew. Dr. Ernest Sheppard gave an illustrated talk on "Hyperphorias."

The Clinico-Pathological Society held its regular dinner meeting February 3 at the Metropolitan Club, with Dr. A. B. Moore as host. "Diverticulosis" was the subject chosen by Dr. E. A. Merritt for discussion.

The International Medical Club honored Dr. Luthero Vargas of Rio de Janeiro, son of the President of Brazil, at a luncheon, January 28 at the Mayflower Hotel. The following officers were elected at this meeting:

Dr. P. S. Constantinople, *President;* Drs. M. W. Perry, Edmund Horgan, and Gregory Birdsall, *Vice Presidents;* Dr. Fred A. J. Geier, *Secretary;* Dr. Joseph Horgan, *Treasurer;* and Dr. Henry L. Darner, *Historian.*

The Smith-Reed-Russell Society of George Washington University School of Medicine held its annual banquet, January 15, at the Kennedy-Warren. Dr. Elmer L. Kayser, Dean of University Students and Professor of European History of George Washington University, was the principal speaker. "The World Today" was the subject of his address.

Announcement was made at this meeting of the new honorary members: Brig. Gen. Shelley U. Marietta, Commanding Officer of the Army Medical Center; Dr. Claude M. MacFall, Professor of Anatomy, and Dr. Harry F. Dowling, Clinical Professor of Medicine, George Washington University School of Medicine.

The Annual Five State Postgraduate Clinic of the District of Columbia Dental Society will convene at the Mayflower Hotel, March 8 to 12.

The District of Columbia Graduate Nurses' Association closed its 38th Annual Meeting at the Willard Hotel on January 13. An Institute on Communicable Diseases was held in conjunction with the business sessions. Various aspects of communicable diseases were discussed by Dr. Daniel Seckinger, Dr. A. B. Coulter, and Dr. William A. Howard.

Miss Annabelle Petersen was reëlected President of the Association.

The George Washington University Medical Society devoted its meeting, January 17, to the subject, "Some Medical and Surgical Problems in Modern Warfare." The guest speaker, Captain John P. Owen, Medical Corps, U. S. Navy, former Fleet Surgeon of the Asiatic Fleet, spoke on "Lessons in Naval Medicine as Learned from Modern Naval Warfare." Short presentations relating to the main topic were as follows: "Neuroses in Wartime," Dr. Walter Freeman; "Orthopedic Problems in Modern Warfare," Dr. Custis Lee Hall; and "Treatment of Burns," Dr. Alec Horwitz.

Dr. Roy Lyman Sexton was reappointed Chairman of First Aid and Water Safety of the American Red Cross of the District of Columbia. **Dr. Donald H. Leeper** will serve as one of his co-chairmen. **Col. Philip W. Huntington** was appointed Chairman of Home Service.

Dr. William Dick Cutter, widely known medical educator and Secretary of the Council on Medical Education and Hospitals of the American Medical Association since 1931, died January 22 at Johnson City, Tenn., of coronary thrombosis following a week's illness.

Dr. Cutter received his degree in medicine from Johns Hopkins University in 1905. In 1911 he became Professor of Physiology and Pharmacology at the University of Georgia. From 1919 to 1923 he served as Secretary of the New York State Board of Medical Examiners. He was Dean of the New York Postgraduate Medical School from 1923 to 1928, and Dean of the School of Medicine at the University of Southern California for three years preceding his affiliation with the Headquarters of the American Medical Association. He is survived by his wife and four daughters.

Dr. John A. Reed, Chief of Emergency Medical Services for Civilian Defense in the District of Columbia, described the accomplishments and needs of his unit before a special meeting of area defense chairmen, which was held at the District Building, January 11.

Dr. Reed also addressed a meeting of 80 Emergency Feeding Unit chairmen in the District Building, January 16.

Dr. Hugh J. Davis addressed the Committee for Training Child Care Volunteers, February 3. His lecture was part of a training course which is being sponsored by the Committee on Emergency Care of Children of the Council of Social Agencies. Classes began January 30 and will continue through March 3.

Dr. Fred W. Rankin of Lexington, Kentucky, President-Elect of the American Medical Association, has been ordered to active duty as a Colonel in the Army Medical Corps Reserve, effective March 1. Colonel Rankin will be head of the Subdivision of Surgery, Professional Services Division, in the office of the Surgeon General.

Dr. Lewis R. Thompson, former Assistant Surgeon General and Director of the National Institute of Health, has been appointed Chief Inspecting Officer of the Public Health Service. Dr. Thompson will be in charge of the Service's activities and its liaison officers in Army Corps areas. **Dr. Rollo E. Dyer** succeeded Dr. Thompson as Assistant Surgeon General and Institute Director, having held office as Assistant Director of the Institute and Chief of the Division of Infectious Diseases.

Miss Janet Fish retired as Superintendent of Nurses at **Emergency Hospital,** February 3, having held the position for fifteen years. Miss Fish received the Croix de Guerre and the medal of Reconnaissance Francaise for her outstanding service as a nurse during the First World War. Following the war she returned to New York to enroll at the Presbyterian Hospital for nurses' training. After graduation she returned to France to aid tuberculosis patients, and was awarded membership in the French Legion of Honor. She came to Washington after serving as Superintendent of Nurses at the Newport (R. I.) Hospital.

Dr. Fred O. Coe will again serve as Vice President of the **Washington Academy of Sciences,** representing the Medical Society. The Academy held its election of officers on January 15.

Dr. Winfred Overholser was chosen President of the **Washington Institute of Mental Hygiene** at a meeting of the Board of Directors, January 31. He succeeds the late Dr. Loren B. T. Johnson, who served as President of the Institute for five years prior to his death. **Dr. Benjamin F. Weems** was elected Treasurer.

CORRESPONDENCE

Washington, D. C., December 16, 1941

Executive Board
The Medical Society of the District of Columbia
Washington, D. C.

Gentlemen:

On December 15 at 6:00 p.m. through the courtesy of the Board of the Providence Hospital and the service of a number of women physicians under the direction of Dr. Margaret Nicholson, the first group of women volunteers for the police auxiliary were given their physical examinations.

I was so impressed with the splendid fashion in which the examinations were handled and so pleased with the excellent impression made upon the volunteers that I feel impelled to write just a word of appreciation for the service these women physicians have rendered. We will have to impose upon them only once or twice more as our final group of volunteers will be ready for examination about January 5.

Sincerely,
Rhoda J. Milliken, *Director*
Woman's Bureau, Metropolitan Police Department

Washington, D. C., January 24, 1942

State Director of Selective Service
National Guard Armory
Sixth and Pennsylvania Ave., N. W.
Washington, D. C.

Dear Mr. Leahy:

This is to acknowledge the receipt of your report on the "Rehabilitation Study in the District of Columbia." This report indicates a great deal of hard work on the part of all those concerned and good judgment in the manner of approach to the determination of costs. From the standpoint of National Headquarters, your survey has proved completely successful and has supplied exactly the information desired. It may interest you and your co-workers to know that the data has proven not only of interest to us, but of very considerable help in setting up our Program of Rehabilitation of Registrants.

In acknowledging receipt of this report, I wish at the same time to express my appreciation and that of National Headquarters to you, to Colonel Gray, Mr. Wiprud of the Medical Society of the District of Columbia, and to all those participating in this study. Will you please convey the appreciation of National Headquarters to the American Red Cross, the Committee on Military Affairs of the Medical Society of the District of Columbia and the District of Columbia Dental Society, and the Health Security Administration.

Sincerely yours,
Lewis B. Hershey
Director of Selective Service

cc: Mr. Theodore Wiprud
Secretary, Medical Society
of the District of Columbia

BOOK REVIEWS

Psychosurgery. Walter Freeman, M.D., Ph.D., F.A.C.P., Professor of Neurology, George Washington University, and James W. Watts, B.S., M.D., F.A.C.S., Associate Clinical Professor of Neurosurgery, George Washington University, Washington, D. C. Pp. 337, with 81 illustrations. Price, cloth, $6.00. Springfield, Ill.: Thomas, 1942.

The work of Freeman and Watts in the treatment of mental disorders by means of surgery is already familiar to the medical profession as a result of their numerous publications on this and related subjects. Their studies have been made with meticulous care and the appraisal of their results has been honest and unassuming.

In presenting a monograph entitled "Psychosurgery," the authors state modestly that the book is intended to establish a foundation for future work along the same lines. The book includes a brief historical review of psychosurgery and a masterly discussion of the functions of the frontal lobes as well as a presentation of the results of prefrontal lobotomy in their patients. Certainly the volume is timely in view of the keen present interest in the utilization of mechanical methods in the therapy of mental disorders. Also certainly, no one is better qualified to present the material encompassed than these authors. Not the least valuable aspect of the book is that it has been written in a manner that is at once interesting and entertaining. It is therefore to be recommended not only because it is a scholarly monograph but because it is easy and pleasant reading.

The format of the volume shows considerable attention to the reader's interests, the illustrations are highly informative, and the index and bibliography are thorough.

H. H. H., Jr.

Synopsis of Genitourinary Diseases, 3rd ed. Austin I. Dodson, M.D., F.A.C.S., Professor of Genitourinary Surgery, Medical College of Virginia; Genitourinary Surgeon to the Hospital Division, Medical College of Virginia; Genitourinary Surgeon to Crippled Children's Hospital; Urologist to St. Elizabeths Hospital; Urologist to St. Luke's Hospital and McGuire Clinic. Pp. 292. Price, cloth, $3.50. St. Louis: Mosby, 1941.

This book is very well suited to its intended purpose as a brief presentation of genitourinary diseases for the medical student and general practitioner. Some of the more complicated and controversial problems have wisely been omitted. The illustrations are very clear and demonstrative.

The dietary section is quite practical, and this section alone should prove invaluable to anyone interested in prescribing a diet with details adequate for all therapeutic dietary demands.

For a sound presentation of positive data this volume is well worth the time spent in its reading.

W. P. H.

MYER JEROME HERSCHMAN, M.D.

(1894–1941)

Dr. Myer Jerome Herschman, urologist, an Active Member of the Medical Society of the District of Columbia, died November 15, 1941.

Dr. Herschman was born October 25, 1894 in Chicago, Illinois. He studied medicine at George Washington University and received his degree in medicine in 1917. He had practiced continuously in the District of Columbia since 1919.

Dr. Herschman held Fellowship in the American Medical Association, and had been an Active Member of the Medical Society of the District of Columbia since 1920. He also was a member of the American Urological Association and a diplomate of the American Board of Urology.

Surving are two brothers, Max and Harry Herschman, both of Washington, and three sisters, Mrs. Joseph Yamin of Baltimore, Mrs. Adolph Fischel of Crawford, New Jersey, and Mrs. Philip Rieskin of Washington. Dr. Herschman was never married.

GEORGE A. HOLM, M.D.

(1888–1941)

Dr. George A. Holm, an Associate Member of the Medical Society of the District of Columbia, died August 25, 1941.

Dr. Holm was born January 28, 1888, at Clare, Wisconsin. He received his Bachelor of Science degree at the University of Minnesota in 1913, and the degree of Doctor of Medicine from the same university in 1915.

Dr. Holm had been on the medical staff of St. Elizabeth's Hospital since 1930.

He became an Associate Member of the Medical Society of the District of Columbia in 1930.

MARTHA M. BREWER LYON, M.D.

(1871–1942)

Dr. Martha M. Brewer Lyon, ophthalmologist, for many years an Active Member of the Medical Society of the District of Columbia, died January 18 at South Bend, Indiana. She resided at 214 LaPorte Avenue.

Dr. Lyon was born March 31, 1871 in Peabody, Mass. She received her academic education at Columbian University, graduating as Bachelor of Science in 1900, and as Master of Science in 1901. For twelve years, 1890 to 1902, she taught in the Washington public schools. Becoming interested in medicine as a profession she entered Howard University as a medical student and graduated in 1907. The following two years she served as Clinical Assistant in Ophthalmology at Howard University School of Medicine.

Dr. Lyon was a Fellow of the American Medical Association and a member of the Association for Research in Ophthalmology. She became an Active Member of the Medical Society of the District of Columbia in 1909, and resigned in 1921, when she moved away from Washington. For the past twenty years she had been practicing in South Bend, Indiana.

She is survived by her husband, Dr. Marcus Ward Lyon, Jr., whom she married in 1902. Dr. Lyon was also an Active Member of the Medical Society for several years.

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DISEASES OF THE ARTERIES AFFECTING THE EXTREMITIES*

WALLACE M. YATER, M.D., F.A.C.P.
Professor of Medicine, Georgetown University School of Medicine

MY PART in this panel discussion is twofold, first, to "start the ball rolling," and second, to keep it "rolling" among the three distinguished gentlemen who constitute the important members of this panel. All three of these gentlemen have distinguished themselves through the original work they have done in the field of peripheral vascular diseases and through the many publications that have appeared under their names.

To "start the ball rolling" I shall give a brief refresher discussion of the general subject of diseases of the arteries as they affect the extremities.

In the October, 1941 issue of the *American Heart Journal* a new tentative classification of diseases of the peripheral arteries, veins and lymphatics was published by the Nomenclature Committee of the Section for the Study of the Peripheral Circulation of the American Heart Association. This is the best classification to date, and the section concerning the diseases of the arteries and arterioles follows:

Diseases of Arteries and Arterioles

I. Functional (vasomotor) conditions
  A. Vasoconstrictor
    1. Raynaud's syndrome (primary or idiopathic) (late stages secondary organic changes in arteries, skin and subcutaneous tissues)
    2. Raynaud's syndrome (secondary)
      a. Traumatic vasospastic syndrome—pneumatic hammer disease, other types of repeated trauma
      b. Neurogenic-cervical rib, scalenus anticus syndrome, spondylitis, neuritis
      c. Secondary to organic vascular disease—arteriosclerosis, thromboangiitis obliterans, syphilitic arteritis
      d. Intoxications—nicotine, arsenic, ergot (early), lead?
      e. Miscellaneous
    3. Acrocyanosis
    4. Cutis marmorata (early livedo reticularis)
    5. Vasospasm secondary to
      a. Lesions of peripheral nerve, brain, spinal cord
      b. Thrombophlebitis
      c. Acute arterial occlusion
      d. Post-traumatic osteoporosis
  B. Vasodilator
    1. Erythromelalgia (erythermalgia)-primary
    2. Erythromelalgia(erythermalgia)-secondary to

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* Part of a panel discussion on peripheral vascular diseases conducted before the Society, January 21, 1942.

- a. Polycythemia vera
- b. Arteriosclerosis
- c. Thromboangiitis obliterans
- d. Trauma
- e. Miscellaneous—secondary to fever, hyperthyroidism, alcoholism, neurocirculatory asthenia, menopause

II. Organic (structural) conditions
- A. Occlusive (organic)
  - 1. Generalized arteriosclerosis
    - a. Arteriosclerosis obliterans
    - b. Medial (Mönckeberg's) arteriosclerosis
    - c. Combined
  - 2. Thromboangiitis obliterans
  - 3. Periarteritis nodosa (essential periarteritis)
  - 4. Temporal arteritis
  - 5. Ergotism (early stages may be spastic)
  - 6. Arteritis and arteriolitis secondary to
    - a. Infectious diseases
    - b. Local inflammatory processes
    - c. Hypertension
    - d. Lupus erythematosus disseminatus (including Libman-Sacks syndrome)
    - e. Idiopathic
  - 7. Simple arterial thrombosis
    - a. Associated with infectious diseases
    - b. Associated with blood dyscrasias
    - c. Secondary to trauma or compression
    - d. Idiopathic
  - 8. Abscess of the wall of artery (state organism)
  - 9. Frostbite
  - 10. Pernio
  - 11. Livedo reticularis
  - 12. Arterial embolism
    - a. Blood thrombus
    - b. Fat
    - c. Air
    - d. Bacterial
    - e. Neoplastic
    - f. Fungous
    - g. Inorganic substances
- B. Nonocclusive
  - 1. Aneurysm
    - a. Congenital
    - b. Syphilitic
    - c. Arteriosclerotic
    - d. Mycotic
    - e. Traumatic
    - f. Idiopathic
  - 2. Arteriovenous fistula
    - a. Congenital
    - b. Traumatic
    - c. Secondary to malignancy or other disease
    - d. Mycotic
  - 3. Congenital anomalies—other than fistula
  - 4. Trauma and external compression (scalenus anticus syndrome)
  - 5. Rupture
  - 6. X-ray, radium, telangiectasia

Note: Ulceration or gangrene, when present, should be noted.

COMMON PERIPHERAL ARTERIAL DISEASES

The most common diseases are arteriosclerosis, thromboangiitis obliterans and Raynaud's disease. The term endarteritis obliterans formerly applied indiscriminately to both arteriosclerotic occlusion and to thromboangiitis obliterans does not have a place in modern thinking. It should not be used since it is purely a pathologic term and does not rightly apply to either of the diseases mentioned.

Obliterating arteriosclerosis, which affects mainly the lower extremities and rarely the upper extremities, is seldom seen before the age of 50 years, and then predominantly in males. Advanced arteriosclerosis as a cause of serious trophic changes of the extremities is relatively uncommon when one considers the great number of individuals who live long enough to develop severe arteriosclerosis. There are two main syndromes that may occur, however. One is intermittent claudication in which pain in the calves of the legs develops after walking a certain distance. This may occur for years without ever developing into a serious gangrenous state. The other is gangrene, which may be limited to the toes or may become more extensive and involve a large part of one or both feet. It is of the dry type. When this tissue necrosis occurs, pain in the affected part of the foot naturally results. This gangrenous process often results from the formation of thrombi in the vessels, and frequently in the smaller vessels within the feet. This is particularly true of arteriosclerotic diabetic patients. In the latter, one must differentiate between gangrene of vascular origin and primary cellulitis resulting from an infection. I do not like the term diabetic gangrene, but much prefer the designation gangrene in the diabetic patient, since there is no true fundamental difference in the lesions between diabetic and nondiabetic patients. Trauma, even slight, and exposure to cold often inaugurate gangrenous processes in both patients with obliterating arteriosclerosis and with thromboangiitis obliterans.

It is not uncommon to find the large vessels patent down to the foot on dissection of an amputated limb. Healing in these arteriosclerotic limbs is not good unless the patient is fortunate enough to have nature herself amputate one or more toes, and even then there may remain an unhealed area for a long period of time. In most instances amputation above the knee is required, since the collateral circulation in these arteriosclerotic limbs is usually inadequate because the smaller collateral vessels themselves are often involved in the arteriosclerotic process. Therefore, it is important not to wait too long before amputating. One should wait long enough only to determine whether the process is going to be self-limited to one or two toes, and whether there is a chance that nature will do the amputating.

Thromboangiitis obliterans, often called Buerger's disease, is a disease of young men, mainly white men of any race, but particularly Jewish. It is a chronic low-grade inflammatory disease of both arteries and veins, of unknown etiology, affecting predominantly the lower extremities, but sometimes the upper extremities, and even arteries and veins elsewhere in the body. There may be attacks of superficial phlebitis of the legs and the formation of subcutaneous nodules very similar to those of arthritis. Intermittent claudication of one or both legs appears and continues for a long time without much evidence of trophic changes in the feet. It is in this stage that so many patients are given arch supports on the mistaken diagnosis of faulty arches. Eventually a moderately moist superficial ulceration appears on one or more toes, often a great toe, and may or may not extend into the foot itself. At this stage severe pain is present, which is usually much worse than that associated with arteriosclerotic gangrene. Unlike the gangrene of occluding arteriosclerosis, healing often occurs with proper treatment, and surgical amputation may not be necessary unless the whole foot is involved. If it is necessary, it is often possible to save a large part of the extremity. In some cases vasospasm is an important factor, and treatment directed to overcome this is often very helpful. There is a borderline group of patients in the late forties and early fifties in whom a differential diagnosis between occluding arteriosclerosis and thromboangiitis obliterans is difficult. In such cases roentgenograms to determine the presence of calcium in the vessels and arteriograms are of considerable value in the diagnosis.

Raynaud's disease is a disease mainly of young women, although males may be affected. Here again the Jewish race is predominantly affected. This is a functional disturbance of the arterioles of the hands and feet, which finally may lead to gangrene of the fingers or toes. With changes in environmental temperature in the direction of cold a spasm in the arterioles occurs. This results in three stages marked by color changes in the fingers or toes. First, there is pallor associated with numbness of the digits. Then, when the hands and feet are warmed, cyanosis sets in, followed by hyperemia or redness. As time goes on there is a tendency for these attacks to be induced by smaller and smaller changes in environmental temperature, until finally the spasm seems to be permanent and results in severe trophic changes.

Diagnosis of Peripheral Arterial Disease

The first thing is to determine whether the patient does have disease of the arteries or not. Sometimes arterial disease is thought to be something else, and conversely at times other things are erroneously diagnosed arterial disease. A great deal of information can be acquired by the use of simple methods of examination. The most important are palpation of the pulses of the various arteries of the extremities, estimation of the skin temperature, observation of postural color changes, study of the blood pressure, and an estimation of the amount of reflex vasodilatation obtainable. These and other methods of examination are briefly described as follows:

1. *Changes of Color.*—In pregangrenous and gangrenous states color changes are obvious at first glance. However, in patients without tissue necrosis they must be sought for by certain procedures. With the patient supine the legs are elevated and the feet moved rapidly back and forth by dorsal and plantar flexion. Normally the soles of the feet retain a good pink color, but in people who have impaired circulation a cadaveric pallor develops. Then the legs are placed in the dependent position, and in individuals with impaired circulation an excessive rubor appears. This dependent rubor, however, is often seen in older patients, and by itself is not necessarily of great significance.

2. *The Peripheral Pulses.*—In the upper extremities the brachial, radial and ulnar arteries are easily palpated, in the lower extremities the femoral, popliteal, dorsalis pedis and posterior tibial. It must be remembered that the dorsalis pedis is absent in about 4 to 7 per cent of the people, and that it is in a position lateral to its usual position in 7 to 8 per cent of the people. It is usually felt on the dorsum of the foot. The posterior tibial is felt behind the internal malleolus of the ankle. Mere absence of the pedal pulses does not indicate arterial disease, however, since they are often absent in older male patients whose feet are warm and of good color. This fact means that these people have an adequate collateral circulation for their needs.

3. *The Skin Temperature.*—This depends on the temperature and humidity of the examining room and body temperature. Excessive moisture of the skin lowers its temperature and dryness increases it. If these factors are controlled and the room temperature remains at approximately 70°F., the skin temperature is dependent chiefly on the blood flow when the patient is resting and his mouth temperature is normal. Differences of more than 0.5°F. are easily detectable with the hand. They are particularly significant if they are different in the two feet. If a satisfactory mercurial skin thermometer is available, it is even better than palpation.

Not only is it important to determine either by palpation or a thermometer the temperature of the skin and the differences in temperature, but the amount of reflex dilatation to heat is important to show the degree of vasoconstriction present. There are various methods of doing this. The test of Landis and Gibbon is simple and adequate. In a room with a temperature of 70°F. the temperature of the big toe is determined with a skin thermometer. The hand and forearm are then immersed in water of 113°F. for 20 minutes. When the normal vasodilatation level of the toe of 91.4°F. is obtained, the test has demonstrated a sufficient vascular bed to overcome the organic obstruction. Below that point vasoconstriction, while it may be important, is probably not the main difficulty.

4. *Blood Pressure Measurements.*—Most physicians never think of making blood pressure measurements except in the arm. However, a great deal can be learned also by making measurements of the blood pressure of the lower extremities. The cuff can be applied both above and below the knee. Ordinarily the pressure in the thigh is about 15 mm. higher than that in the arm, but with significant diminution of the lumens of the large vessels this will be decreased and perhaps unequally in the two legs. The oscillometer is a better instrument for this purpose, giving more information, but it is not necessary for the practicing physician to possess one of these.

5. *The Cutaneous Histamine Reaction.*—This test was devised to demonstrate the degree of collateral circulation by means of reactive hyperemia to intradermal injections of small amounts of histamine. The acid phosphate

solution of histamine in 1 to 1,000 solution is obtainable in ampoules. When 0.1 c.c. is injected intradermally a flare is produced with a wheal in the center within 5 minutes. Such injections are made at various points on the lower extremities, but not over bony prominences. The flare is absent when (1) there is not enough head of pressure in the skin vessels to fill up the arterioles dilated with histamine, (2) when arterial spasm exists, or (3) when the sensory nerves of the skin have degenerated.

Reaction indicates: (1) the lowest level of safe amputation in patients with frank gangrene, as indicated by the lowest level at which a histamine flare can be detected; (2) improvement of collateral circulation during a course of conservative treatment with drugs and physical measures.

6. The Intradermal Salt Test.—This is a more reliable test than the preceding one, but requires a longer time for performance. At various levels of the extremity intradermal injections of 0.2 c.c. of 0.85 per cent salt solution are made. The wheals thus produced are observed until they disappear, palpation being employed. Normally, they disappear in 60 minutes. Readings of 5 to 10 minutes are usually found in areas adjacent to gangrene, and readings between 10 and 20 minutes suggest a deficient circulation.

7. Roentgenography.—Ordinarily X-ray films may be made in middle-aged patients to detect the presence of calcium in the arteries. Of more importance is arteriography. The best medium so far devised for this purpose is thorotrast. Arteriography shows the irregular lumen of arteriosclerosis as contrasted with the regular lumen of thromboangiitis obliterans. It also shows the level of occlusion of vessels, and the amount of collateral circulation. Therefore, it is of value not only in diagnosis, but in helping to determine the site or necessity of amputation.

8. Biopsy.—In rare instances of a superficial occluded artery, such as the dorsalis pedis, biopsy is very informative, particularly in differentiating between arteriosclerotic occlusion and thromboangiitis obliterans in borderline cases.

THERAPEUTIC MODALITIES

In considering this subject certain fundamental principles must be understood. If a large artery is suddenly obstructed the greatest interference with the circulation exists immediately. Vasoconstriction and shock are greatest at this time. However, paths for collateral circulation exist for occlusion of any artery at any site. The number and size of these paths differ very greatly in obstructions of different arteries at different sites. The state of the collateral vessels themselves is of the greatest importance. Almost any medium-sized artery in a healthy young adult might be completely occluded without gangrene resulting. The important things to do would be merely to overcome spasm of the collateral vessels and to maintain body warmth. In the arteriosclerotic patient, however, even the collateral vessels are more or less affected by sclerotic lesions. A certain amount of spasm, however, may still play a role. The chances of gangrene are naturally much greater.

The treatment of organic vascular disease consists largely of physical therapy to increase blood flow by producing vasodilatation of the arteriolar bed and thus widen collateral arterial channels. Great care must be taken to prevent trauma, friction, excessive heat or cold, and chemical irritation of the extremities with impaired circulation. Cold is used only in treatment for the immediate thawing of frostbite and in cases of cold allergy. The only possible exception is in the use of cold water for contrast baths. No hot objects must be allowed to touch the skin, and the maximum temperature of the environmental air should be 105°F. Massage is not used. Strong antiseptics must absolutely be avoided. If an antiseptic is necessary for an infected gangrenous area Azochloramine with triacetin (1 to 500) is safe. More recently ointments containing sulfanilamide, with or without allantoin, have been in use.

1. Body Warmth.—Warm clothing is essential in patients with impaired circulation of the extremities. Long heavy underwear and clean woolen socks are advocated. Shoes that do not produce friction at any point must be provided.

2. Care of the Feet.—Great care must be taken in the cutting of toenails and the treatment of calluses and corns. The feet should be kept clean and the skin softened with lanolin. Lamb's wool may be placed between the toes to avoid friction.

3. Radiant Heat.—In cases of impending gangrene the lower extremities should be kept warm by means of a heat cradle, preferably one that is thermostatically controlled. The temperature should be maintained between 85°F. to 95°F.

4. Heat Applied to Distant Parts of the Body.—Vasodilatation may be obtained in the lower extremities by immersing one or both forearms in hot water (113°F.) or wrapping both arms in electric pads covered by towels. In patients with thromboangiitis obliterans of the arms these procedures may be unwise.

5. Diathermy.—This is not to be used locally, but is of value if carefully applied to the back and abdomen for the vasodilating effect on the extremities.

6. Hot Soaks.—Soaks with boric acid solution heated to not over 100°F. are efficacious for encrusted or infected lesions. These may be given four or five times daily for 15 to 30 minutes each.

7. Hot Packs.—These are used only in cases of thrombophlebitis, and then with the skin greased with petrolatum.

8. Contrast Baths.—These are of value in milder chronic cases of vascular disease in which tissue necrosis has not occurred. Their use is empiric and, therefore, not mandatory. Two tubs containing cold and hot water are used. The cold water should not be lower than 60°F. and the hot water not higher than 105°F. The legs and feet are placed alternately in the tubs, beginning and ending with the hot tub. They should be maintained in the hot tub for 3 minutes at a time, and in the cold tub for 1 minute at a time. The extremities should be carefully dried at the end of the treatment.

9. Postural Exercises.—These are also of value in early or chronic cases of vascular disease when trophic lesions are not present. They were first advocated by Buerger. A simple Buerger board may be used for this purpose. The legs are held elevated on a board for 1 minute, or until the feet are blanched, then they are held in the dependent position for 1 minute, or until good color has returned. They are then rested in the horizontal position for from 1 to 3 minutes. These exercises may be done for periods of one-half hour two or three times daily.

10. Exercises with Extremities Elevated.—These exercises are not suitable for arterial diseases but may be of value for venous insufficiency following thrombophlebitis of large veins not earlier than 4 weeks after the thrombosis. Lying supine with the legs raised the patient practices bicycle movements for 1-minute periods, alternating with rest periods of 1 minute.

11. Intermittent Pressure and Suction (Pavaex or Passive Vascular Exercise).—In a transparent airtight chamber the pressure of the air around a leg is alternately changed from minus 80 to minus 120 mm. Hg to from plus 20 to plus 60 mm. Hg for 15 to 30 seconds each for an hour or more, three or four times daily. This method of therapy is expensive and it is doubtful whether it is of sufficient value to warrant the expense. It should never be employed when there is venous thrombosis or an open lesion. It is said to be of value in cases of frostbite and embolism. In the latter it is of no value unless the embolus has lodged at a point below the cuff around the thigh.

12. Intermittent Venous Occlusion.—With a sphygmomanometer cuff or a special automatic apparatus the pressure in the extremities is raised intermittently to a point just sufficient to obliterate the veins. This method is time-consuming and has not been tried sufficiently for proper evaluation.

13. The Sanders Bed.—This is a specially built bed which is automatically raised and lowered by electricity, thus giving the patient Buerger's exercises without effort on the part of the patient. It is a pleasant form of treatment, but is very expensive and, therefore, of not particularly practical value.

14. Therapeutic Typhoid Vaccine.—For years typhoid vaccine has been given intermittently to patients with Buerger's disease, for the purpose of overcoming vasoconstriction, and for controlling pain. Thus far its value is empirical only, but it is a popular method of treatment. Typhoid vaccine prepared especially for intravenous injection for this purpose by Lederle Company is obtainable. A dose of 25 million or 50 million typhoid and paratyphoid bacilli is injected intravenously once or twice a week for a number of weeks. The production of a chill indicates that too much of the vaccine has been used.

15. Intravenous Injection of Liquids.—Because of the increased viscosity of the blood and diminished blood volume in thromboangiitis obliterans, the intravenous injection of liquids has been advocated by certain workers. The usual procedure is to inject 300 c.c. of 5 per cent solution of sodium chloride intravenously every other day. The value of this modality is still unsettled. Patients with thromboangiitis obliterans, however, should be instructed to drink from 3 to 4 quarts of liquids daily.

16. Drugs.—Drugs play a minor role in the treatment of peripheral vascular diseases except symptomatically and supportively. However, theobromine sodium acetate in large doses (40 to 60 grains) is a good vasodilator. Papaverine by mouth or intravenously is also a good vasodilator. The dose is $\frac{1}{3}$ to $\frac{1}{2}$ grain. Mecholyl and histamine iontophoresis have been found to be of value in cases of varicose ulcers and scleroderma particularly.

17. Surgical Measures.—These will be discussed by other participants in this panel.

18. Cessation of Smoking.—Smoking is absolutely prohibited in every case of thromboangiitis obliterans, since although not a cause of this disease, it is undoubtedly an important factor in preventing healing of ulcerations.

AMPUTATION

Amputation must not be delayed too long in cases of arteriosclerotic gangrene, whereas in cases of thromboangiitis obliterans it is the very last resort. There are some who believe that amputation should not be performed in these cases unless the whole foot, including the heel, becomes gangrenous. It is surprising how much tissue can be destroyed and healing result. Time, rest and warmth are the main measures to bring this about. Some of the simple therapeutic modalities previously described may be employed.

Collapse therapy is not a panacea for pulmonary tuberculosis. It is a valuable adjunct when used in conjunction with the time-proven principles now in common practice. Every patient should have the benefit of mature judgment to determine the possibilities of expediting recovery by the use of compression methods. An early diagnosis, however, together with the intelligent selection of therapeutic measures, offers a patient the best chance of recovery. C. HOWARD MARCY, M.D., *Pennslyvania's Health*, December, 1941.

A member of the intimate family of a tuberculous patient only rarely has a negative tuberculin test. J. B. BOHORFOUSH, M.D. AND PAULINE MICHAEL, M.D., *Amer. Rev. of Tuber.*, October, 1940.

The Japanese death rate is 17.4 per 1000 as compared to 10 or 11 in the United States. Japan's present death rate, in fact, resembles ours of 1900. Individual causes of death in Japan are about as prevalent now as in this country about 1900. For example, the United States tuberculosis death rate now is 45 per 100,000. In Japan in 1937 the rate was 204, closely resembling our tuberculosis death rate in 1900 of 196. The picture is similar for diarrhea and enteritis. America has more than twice as many men to draw on in the military age group as Japan—25 million men from 20 to 34, as against Japan's 11 million in this age group. *Science News-Letter*, January 17, 1942.

THE RELATION OF ETIOLOGY TO THE TREATMENT OF VARICOSE VEINS*

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THE Nomenclature Committee of the Section for the Study of the Peripheral Circulation of the American Heart Association has prepared the most comprehensive classification of Diseases and Abnormalities of the Blood and Lymph Vessels of the Extremities yet to be published. The committee states that the object for such a classification is "to provide a list of preferred and universal terms which may be used by authors, research workers and others interested in this field." I would like to present that portion which deals with the peripheral veins as a basis for discussion in this panel.

Diseases of Veins

- I. Vasomotor (functional)
  - Spasm
    - Following injury or disease of vein or accompanying artery or nerve
- II. Organic (structural)
  - A. Obstructive
    - 1. Thrombophlebitis and venous thrombosis (phlebothrombosis)
      - a. Primary
        - 1. Thromboangiitis obliterans
        - 2. Recurrent or migrating (without arterial lesions)
        - 3. Essential
      - b. Secondary to
        - 1. Mechanical injury (contusion, laceration, surgery)
        - 2. Muscular effort or strain
        - 3. Chemical injury (sclerosing agents, drugs, solutions for diagnosis)
        - 4. Inflammatory or suppurative lesions—Infectious diseases
          - a. Tuberculosis, syphilis, actinomycosis
          - b. Other bacteria (to be specified)
        - 5. Severe ischemia
        - 6. Chronic disease of vein wall (varices, phlebosclerosis) (Late complications—varicose or postphlebitic ulcers)
        - 7. Blood dyscrasias (polycythemia vera, leukemia, pernicious anemia)
        - 8. Epidermophytosis (?)
    - 2. Neoplastic invasion of vein
    - 3. Venous compression, with or without thrombosis or thrombophlebitis, due to
      - a. Gravid uterus
      - b. Neoplasm
      - c. Aneurysm
      - d. Scar tissue
      - e. Scalenus syndrome
      - f. Fractures or dislocations
      - g. Increased intra-abdominal pressure (ascites, etc.)
  - B. Nonobstructive
    - 1. Varicose veins (aneurysm)
      - a. Primary-congenitally incompetent valves
      - b. Secondary (to proximal obstructive lesions or pressure)
      - c. Secondary to phlebitic destruction of valves
      - d. Compensatory dilation of collateral veins
    - 2. Arteriovenous fistula
      - a. Congenital
      - b. Traumatic
      - c. Mycotic
      - d. Secondary to local disease
    - 3. Aberrant position
    - 4. Hypoplasia
    - 5. Phlebectasia
    - 6. Periphlebitis without thrombosis
    - 7. Phlebosclerosis (not usually obstructive)
    - 8. Rupture

In the short time allotted to me it is impossible to cover in any manner the entire subject of diseases of the peripheral veins. Therefore, I shall confine my discussion to the obstructive group of diseases of the peripheral veins. I would like to narrow my subject even further to the point of discussing only one phase of the obstructive diseases of the veins, namely, varicose veins.

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* Part of a panel discussion on peripheral vascular diseases conducted before the Society, January 21, 1942.

Varicose veins may be defined as an abnormal dilatation of a vein or a group of connecting veins in which there is an elongation and tortuosity of these vessels, an incompetency of their valves, and finally a reversal of blood flow through the involved segments. Under this definition "varicose veins" is simply an anatomic descriptive term and in no way implies the etiology of the condition. The proper treatment of any case of varicose veins depends upon a thorough knowledge of the underlying pathologic bases for the varicose state as well as upon the status of the entire venous circulation in the involved extremity. Furthermore, the only hope of any success with preventive measures lies in the early recognition of the etiologic factors.

There is no scientific proof that varicose veins are hereditary or that there is a congenital weakness of the vein or its valves. The actual cause of varicose veins is overloading of the veins, resulting in an abnormal elevation of the local venous pressure. This elevation of pressure must be of sufficient magnitude and of sufficient long duration to cause a permanent dilatation of the vessels for a varicose state to result. The increased pressure may be produced suddenly, intermittently, or gradually. It may result from occlusion of the lumen of the vein from within, by compression of the vein wall from the outside, from an abnormal shunting of arterial blood into the veins, or finally from static pressure.

Acute femoro-iliac thrombophlebitis provides an example of a sudden elevation of the blood pressure in the peripheral veins which in the end often leads to the varicose state. In this condition the main venous channels are completely obstructed by a thrombus. There is an immediate abnormal elevation of the local venous pressure and a damming back of blood into the vessels below the point of obstruction. These vessels become dilated, their valves incompetent, and there is a reversal of blood flow into more distal tributaries so that new routes of egress are formed. These dilated vessels are collateral channels and are essential to the circulation of the extremity. If this state of affairs is maintained over a long period of time varicose veins will develop. If proper treatment is given at the earliest symptoms of thrombophlebitis there is a good chance of prompt alleviation of this condition and an adequate circulation will be restored, and varicose veins will not result. The prevention of varicose veins in thrombophlebitis begins at the onset of the acute stage of the disease. The main objects are to limit the extent of the thrombosis and to correct the altered circulation. This consists in temporary sympathetic block, application of heat, elevation, and active motion of the involved extremity. As soon as the infection has subsided, properly fitted elastic stockings are supplied and the patient allowed out of bed. The stockings are worn until adequate deep collaterals have developed. Before any surgical treatment is undertaken adequate deep circulation must be demonstrated. The most accurate test to determine the status of the deep circulation is the direct blood pressure determinations in the deep veins at rest and during exercise. If there is an abnormal elevation of pressure surgical occlusion should not be undertaken. Elastic stockings should be worn until sufficient deep collateral vessels have developed.

Pregnancy provides an excellent example of incomplete high obstruction of the veins by pressure outside the veins causing an abnormal elevation of intravenous pressure distal to the obstruction, which in turn may produce varicose veins. This is also an example of a reversible mechanism; that is, after the obstruction is removed the varicose state may disappear, provided too much damage has not already occurred. In pregnancy there is an increase in the venous pressure of the veins of the lower extremities. This pressure in the recumbent position usually ranges up to 300 mm. of water. In the upright position the degree of elevation varies in different individuals. In some cases the uterus produces direct pressure on the iliacs or vena cava and there will be an abnormal elevation of venous pressure of the lower extremities. This pressure may be applied so that the vessels of both extremities are compressed, or it may compress the vessels only on one side. In those cases in which there is an obstruction the peripheral veins will be overdistended and a varicose state may develop. However, compression of the superficial veins of the legs during pregnancy will in most cases prevent varicosities from developing. Active treatment of varicosities during pregnancy should be confined to the large and extensive varicosities.

An example of varicose veins resulting from overloading of unobstructed veins is provided by congenital abnormal arteriolar venous anastomoses. In this condition there exists abnormal anastomoses between the arterioles and venules so that arterial blood is shunted into the veins without passing through the capillary bed. These abnormal anastomoses may be localized to a small area or they may involve the entire extremity. The shunting of the arterial blood into the veins at a much higher pressure than that found in the capillary bed leads to a dilatation and tortuosity of the veins. In time the valves become incompetent and a varicose state results. The main points in the diagnosis of this condition are increased warmth over the involved area, a high local venous pressure, a high oxygen saturation of venous blood, varicose veins, chronic ulcerations, and arthritis of the small joints. The treatment of the varicosities resulting from congenital abnormal arteriolar venous anastomoses must be determined by the location and extent of involvement. In some cases the varicosities may be successfully obliterated by sclerosing agents. In some a local excision of the involved vessels may be required. In still others more conservative measures are indicated.

A fourth method by which varicose veins may be produced is that of prolonged static pressure. When an individual moves from a supine to a standing position there is an immediate reaction in the blood pressure in the veins of the lower extremities. The normal venous pressure of the veins of the leg at rest in supine position ranges between 50 and 150 mm. of water. In the upright position this pressure ranges between 500 and 1,200 mm. of water or even higher. Furthermore, the pressure gradually increases as one stands quietly. The veins become distended and there is a slowing of the venous blood flow. On moving the extremities the veins tend to empty and there is an immediate fall in the pressure. Persons who are forced to remain in the upright position for long hours, such as nurses, doctors, policemen, barbers and cooks, force their veins to be distended to the maximum. The superficial veins are the most affected. The deep veins are partially compressed by the muscles. After years of this strain one small segment of vein becomes overdilated and the valves become incompetent, allowing back flow into the distal segment. This in turn places an added strain on the next set of valves and they become incompetent. This process is gradually extended until a long segment, an entire vein, or a group of veins becomes varicosed.

The preventive measures are obvious. The earlier active measures are employed, the better the results. When only one segment of the vein is involved, prompt obliteration of that segment will prevent further extension. Once the varicose state has been fully developed obliteration of all the varicosities is indicated. This usually requires high ligation of the saphenous and injection of the varicose segments below. These measures do not remove the etiologic factors, and a recurrence is to be expected if the same stress and strain are continued. Recurrences may be averted in a measure (1) by training the patient to relieve the building up of back pressure by periodic exercises of the leg muscles, (2) by the wearing of properly fitted elastic stockings during the long period of standing, and (3) by checking the first break in the chain by prompt injection of any segment of vein that becomes dilated and incompetent.

THE PHYSIOLOGIC BACKGROUND OF PERIPHERAL VASCULAR DISEASE*

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DURING the past decade we have reached a better understanding of the factors that regulate blood flow to the extremities. The investigative work of Lewis, Grant, Landis, Page, Herrmann, Printzmetal, Wright, my co-speakers, and many others has led to more accurate methods of diagnosis and thereby to better therapeutics.

In studying any given condition affecting the peripheral blood vessels one not only attempts to give it a name but fundamentally tries to determine the degree of organic change and the degree of functional alteration in that particular patient. Procedures to estimate the proportion of each factor have become simplified to such an extent that the physician trained in this field can make a diagnosis, give a prognosis, and outline therapy without elaborate apparatus or prolonged study in the great majority of instances.

DIAGNOSIS

There are certain observations that aid one in evaluating circulatory changes in the extremities. Coldness implies impaired circulation, but if that finding can be relieved by the release of spasm, then we have evidence of functional disease. When one releases sympathetic control by local, spinal or general anesthesia, or by the method advocated by Landis, and produces a rise in the peripheral temperature, one has evidence that arterial or arteriolar spasm, especially in the cutaneous blood vessels, is an important factor in producing the patient's symptoms. The degree of temperature rise is an index of vasomotor function, as first pointed out by George Brown. The failure to elicit a rise in temperature points to organic closure of the arterial system. Since peripheral vascular diseases are usually a combination of both organic and functional changes, such tests are important in establishing the primary change.

Rubor on dependency and pallor on elevation of an extremity are classical signs of impairment due to occlusion of major vessels on an organic basis. When functional occlusion occurs (most often involving the smaller vessels) these signs are usually absent.

Cyanosis of an extremity is a sign of impaired venous drainage if it is limited to the extremity. It usually points to venous stasis due to back pressure in the veins or to stagnation of blood resulting from a much impaired inflow through the arteries.

Local edema of an extremity (unless from some systemic disease such as renal or cardiac disease or protein deficiency, etc.) implies venous or lymphatic disease in that extremity and is never found in uncomplicated local arterial disease affecting the extremity.

TREATMENT

The therapy of any peripheral vascular disease is directed in most instances toward increasing blood flow. This can be accomplished by avoiding or overcoming vascular spasm, especially in collateral vessels, and by forcing as much blood through damaged vessels as possible.

In the first instance one must eliminate mechanical factors of pressure, vibration and hydrostatic pressure. Tightly binding clothing or appliances must be avoided. Occupations utilizing vibratory apparati must be discontinued and jobs that necessitate standing for long periods altered to prevent vascular stasis.

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* Part of a panel discussion on peripheral vascular diseases conducted before the Society, January 21, 1942.

Tobacco has a strong vasospastic effect in most individuals, and ergot and its derivatives produce a narrowing of the vascular lumen by contraction. In some individuals chilling and in many emotional instability or strain are powerful vasospastic factors. All of these must be considered and eliminated, if present and if possible, before one considers the use of active vasodilating procedures.

Many substances have been advocated to release spasm. Among the drugs are the cholines, the nitrites, the xanthines, papaverine, pantopon, and some of the atropine derivatives. Many of these when given by mouth or hypodermically have very brief effects, and often the side reactions make their use impractical. However, two commonly used substances, the salicylates and alcohol, are good vasodilators and have the added effect of mild analgesic reaction. Aspirin in doses of 10 grains (0.65 Gm.) and an ounce of whiskey three times a day often give as much or more relief than many of the much advertised vasodilators.

In addition to drugs one has available certain hormones whose action is opposed to adrenalin. Various pancreatic extracts have the power to dilate the vessels of the collateral circulation, and their effect is apparently prolonged when given intramuscularly.

The use of an optimum environmental temperature of from 88°F. to 94°F. tends in most instances to promote maximum vasodilatation, while lower temperatures produce spasm and higher ones increase the metabolic demands of the tissues beyond the ability of the impaired circulation to meet this demand by increased blood flow.

Hot packs with temperatures up to 110°–114°F. may be used in cases of phlebitis with normal arterial structures to promote maximum blood flow and prevent venous stagnation.

Increased body temperature produced by the intravenous use of foreign protein such as typhoid vaccine in doses sufficient to give a rectal temperature of 100°–101°F. without chill is an excellent way of improving peripheral blood flow over a period of 24 to 48 hours.

Some workers have demonstrated increased peripheral blood flow by the introduction of hypertonic saline (300 c.c. to 500 c.c. of a 5 per cent solution) intravenously.

Dr. Norman Freeman, the next speaker on this panel, will tell you of the indication for surgical removal of sympathetic control in various vascular diseases in order to promote maximum blood flow to any extremity. Similar temporary effect can be produced by paravertebral nerve block with novocaine or its associated forms.

Finally, certain mechanical means have been devised to aid in the therapy of vascular diseases with impaired arterial supply.

The alternate pressure-suction boot or chamber causes inflow and outflow of blood in an extremity by changing the pressures in the chamber holding the arm or leg. If the occlusion is located at a point which will be within the boot, there is a well to draw the blood from. However, if the occlusive process is above the cuff of the boot one cannot expect any degree of improvement. Moreover, a close fitting cuff may mechanically, by pressure, occlude collateral flow in the skin vessels.

Intermittent venous occlusion as effected by automatic apparatus which inflates a cuff and then releases the pressure is said to produce a reflex vasodilatation and increased blood flow which more than compensates for the reduced blood flow occurring during the period of constriction.

The oscillating bed and other mechanical devices to elevate and depress the affected extremities are merely passive ways of carrying out

(Continued on page 124)

RECENT ADVANCES IN THE SURGICAL TREATMENT OF PERIPHERAL VASCULAR DISEASE*

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IN RECENT years rapid advances have been made in the knowledge of the function of the circulation and the physiologic mechanisms which control it. These advances have made possible the expansion of medical and surgical therapy, so that today many diseases which could not be effectively treated a decade ago are being successfully attacked. One has merely to consider certain of the outstanding contributions of the past decade to understand how much progress has been made in the therapy of vascular disease.

The speakers now present with me on this platform have contributed richly both in the fundamental sciences and in clinical studies. Dr. Yater's visualization of the arterial tree after injection of a radio-opaque substance has been outstanding. Dr. Veal has made signal contributions to our understanding of the anatomy and physiology of arteries and veins. Dr. Duryee's studies in clinical science have helped to broaden our understanding of vascular disease as it is encountered in patients. It is indeed a privilege for me to be associated with them in working out problems in this clinical field, and I am greatly honored by the opportunity of appearing before you in their company this evening for a round table discussion on problems in the vascular field.

It is not possible to cover the entire field of surgical treatment of vascular disease in the allotted time. Accordingly, I feel that it may be worth while to consider certain of the recent advances in vascular surgery with the hope that answers to questions which are raised during the discussion following the papers will illuminate the broader field.

The first problem that will concern us is the conservative treatment of the open lesion. As Dr. Yater has pointed out, spontaneous amputation, or as he has termed it, "nature's amputation," usually is the most successful one. This spontaneous amputation as it is encountered in Buerger's disease, however, is complicated by two factors. In the first place, during the period of increasing necrosis before demarkation has occurred, the patient experiences terrific pain. This period, be it long or short, is extremely distressing to the patient and to his family. If the pain is lessened by the use of narcotics the possibility of addiction always lies ahead. If, on the other hand, we refrain from giving the necessary sedatives, demoralization of the patient is the ultimate result. The relief of pain in the localized lesion in patients with Buerger's disease has been successfully handled in recent years by crushing the sensory nerves which supply the affected part. This simple operation was devised by Smithwick and White of Boston. By crushing the posterior tibial, superficial and deep peroneal, sural and saphenous nerves in the lower third of the leg, the entire foot can be rendered completely free from pain. The paralysis of the muscles supplied by the nerves is not of significance and the patients are able to walk even without sensation in the soles of their feet. Regeneration of the nerves generally takes place in from 2 to 6 months.

The operation can be performed only in cases of Buerger's disease, since there is a capacity to form new collateral circulation. I have not been able to use this form of treatment successfully in the gangrene of the toes of patients with arteriosclerosis or with diabetes, probably because these patients have not the same capacity for regeneration of collateral circulation. Extensive operative procedures on the foot can be performed without pain after crushing the sensory nerves supplying the part.

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* Part of a panel discussion on peripheral vascular diseases conducted before the Society, January 21, 1942.

Crushing the nerves is not without danger since the impaired circulation jeopardizes the healing of the wound made to expose the nerve. Again, in the absence of sensation, the patient is unable to say when the tissues of his foot are being injured, and it is more difficult for the surgeon in charge of the case to make an early diagnosis of infection or an accumulation of pus. Although this procedure is not without its drawbacks, it has enabled us to maintain the morale of the patient during the distressing period of waiting while spontaneous amputation takes place.

Another problem is presented by the length of time which is necessary for demarkation to occur. An important contribution to the shortening of this period of time has been made by Mohs, Schmidt and Sevringhaus of Madison, Wisconsin. Last spring they reported a series of cases of peripheral vascular disease which had been treated by the chemical fixation of the affected tissues by the application of 45 per cent zinc chloride. By this technic the tissues which were nonviable, or in which recovery through development of collateral circulation was unlikely to occur, were fixed in situ and then, after a period of 24 hours, could be excised with a knife. It is well known that necrosis, like the iceberg, is only about one fifth above the surface, with the greater extent of the process hidden. After excision of the fixed tissue it is then possible by observing the appearance of the underlying tissues to see how deeply the necrotic process extends. Successive applications of the fixative are then possible in order to reach viable tissue. This procedure has not only shortened the period of the process of demarkation, but has also an advantage in the fact that when certain distal tissues are discarded, the amount of circulation left for the remainder of the extremity is proportionately greater.

Advances in our understanding of the physiology of the mechanism of blood clotting have resulted in great progress in the surgery of blood vessels. Embolectomy can be performed with better results. Heparin has been developed for intravenous use and coumarin for administration by mouth. Arteries can now be sutured with a fair expectation of success, and even transplantation of veins to take the place of diseased arteries has been reported by Gordon Murray of Toronto.

In dealing with the problem of embolectomy success depends upon early recognition and prompt intervention. If it can be performed within the first 6 hours the results are good. Occasional success may be obtained by removal of the clot even up to 12 hours after it has lodged. Many times the patient will be in such poor condition because of a previous coronary occlusion or because of the peripheral circulatory failure (shock) which occurs soon after an embolus has lodged in a major blood vessel, that it is felt that the patient cannot survive such an extensive surgical procedure. It is my strong feeling that if the patient cannot stand the operation of embolectomy, he undoubtedly will not be able to survive the distressing period of mortification which will occur if the embolus is not removed. There are few clinical pictures more distressing than that of progressive extension of gangrene which occurs after a major peripheral embolism. Early diagnosis and courageous treatment bring ample reward in lessening suffering and in the miraculous restoration of health when embolectomy has been successfully effected.

Although sympathectomy in the treatment of arterial disease has been practised but fifteen years, it has won for itself a well recognized place in the therapeutic armamentarium. In the time which is left I should like to consider with you certain of the conditions for which sympathectomy is useful and the indications for this operation.

The most obvious result of sympathectomy is the improvement in the circulation of the skin, and so it is not surprising that this operation should have been advocated first in order to improve the circulation to the periphery, as in cases of Raynaud's disease. In addition to the warming of the skin there is a disappearance of sweating. The response suggests the possibility of using sympathectomy in order to abolish the excessive sweating which at times may be such a disturbing condition. The injection of alcohol is rarely used now because the results are not permanent and there is always an accompanying intercostal neuritis. Upper thoracic sympathectomy, however, can readily be performed, and this operation gives lasting relief from this distressing condition.

When the blood supply to the muscles is reduced, the distressing symptom known as intermittent claudication is frequently produced. Generally the interference with the blood supply is produced by organic obstruction of the blood vessels. Last year, however, Hugh Montgomery and I became interested in the response of certain of these patients to the injection of novocaine into the region of the lumbar ganglia. We observed that certain patients with organic obstruction of the arteries in the lower extremities also presented clinical evidence of abnormal vasoconstriction. Not only were their feet cold, but there was increased sweating, cyanosis and contracted veins. After temporary paralysis of the lumbar sympathetic nerves by injection of novocaine into the region of the ganglia, there was improvement in the color of the feet, with increase in the caliber of the veins, and disappearance of the sweating.

In patients who had intermittent claudication associated with abnormal vasoconstriction we observed that there was considerable improvement in their ability to walk when the sympathetic tone was abolished. Lumbar sympathectomy has been performed in a selected group of these patients with considerable relief of the intermittent claudication.

It is important to emphasize that intermittent claudication generally is due simply to organic obstruction of the arterial flow. Sympathectomy naturally is of no use in the treatment of these cases. However, when there is an associated element of vasospasm or abnormal vasoconstriction, and when it can be demonstrated that these patients are improved with release of the vasomotor tone, lumbar sympathectomy can be expected to be useful.

In conclusion, I should like to emphasize again that these advances in the surgical treatment of vascular disease have been made possible through the increase in our understanding of the fundamentals of the anatomy, physiology, chemistry and pathology of the blood vessels. With further increase in our knowledge and with improvements in our methods of diagnosis, it is hoped that more aid can be given to sufferers from vascular disease.

Complete immobilization not indicated for poliomyelitis. According to evidence regarding the nerve supply of muscles paralyzed by poliomyelitis, massage and freedom of movement rather than immobilization are clearly indicated in the treatment of this condition, an editorial in *The Journal of the American Medical Association* for December 6, 1941, points out.

"Several years ago," *The Journal* says, "Sister Kenny [an Australian nurse] recommended that free movement should be allowed and that affected muscles should be accorded the benefit of massage and passive movement instead of immobilization. It should be pointed out in this connection that there is no experimental evidence to support the contention that single muscle units might, as a result of appropriate manipulation, be encouraged to send their never fibers to muscle fibers which have been rendered atrophic by anterior horn cell degeneration. Normal units, however, become atrophic under conditions of immobilization, since muscle fibers are dependent for normal stimulation on their local reflexes (e.g., stretch reflexes) and immobilization arrests the flow of these proprioceptive impulses as effectively as it abolishes the flow of lymph. Massage and freedom of movement, therefore, are clearly indicated if all available motor units in paretic muscles are to remain at their maximum physiologic capacity."

PERIPHERAL VASCULAR DISEASES*

A Panel Discussion

WALLACE M. YATER, M.D., F.A.C.P.
A. WILBUR DURYEE, M.D., F.A.C.P.
NORMAN E. FREEMAN, M.D., F.A.C.S.
J. ROSS VEAL, M.D., F.A.C.S.

Dr. Yater: Now comes the part of this panel discussion that I believe you will like best. I have at hand a large number of excellent questions on various aspects of peripheral vascular diseases. I intend to submit to my associates on this panel as many as we have time for. The questions are all so good that it is hard to know which to ask first.

Question: How would you differentiate between thromboangiitis obliterans and arteriosclerosis obliterans?

Dr. Duryee: Thromboangiitis obliterans is a disease of inflammatory or irritative origin. It occurs in comparatively young adults (usually under 45), is much more common in the male, and in about 40 per cent of the cases is accompanied by phlebitis. There is no evidence of arteriosclerosis as shown by X-ray examination. The arteriosclerotic patient is 45 or over. X-ray examination often shows evidence of calcification of his arteries. There is usually no phlebitis, but there are often hypertension and evidences of arteriosclerosis in other organs, such as the heart, kidneys, brain or retinae.

Question: How do you determine the site for amputation in cases of gangrene due to arteriosclerosis obliterans?

Dr. Veal: There are certain important observations to be made. If the patient has palpable dorsalis pedis and posterior tibial pulsations, it is usually safe to work on the toes. On the other hand, if these pulsations are absent, other tests are needed. The safest and best is the arteriogram. This shows the whole pattern of the arterial circulation and usually indicates whether amputation should be made above or below the knee. Another useful procedure if the patient has no edema is the "salt absorption test." (Dr. Veal here described briefly the technic of this test.) If the absorption of the saline wheals below the knee takes place faster than 45 minutes, amputation must be done above the knee. In my opinion the "histamine wheal test" is valueless, and oscillometric studies are only slightly helpful.

Question: What is the best position for a gangrenous foot?

Dr. Freeman: In a position of moderate or slight dependency. If you elevate the leg too much, you produce blanching and ischemia. On the other hand, if you lower the leg too far, the factor of hydrostatic pressure increases, and the foot becomes cyanotic and the veins overfilled. In the final analysis, this question has to be answered individually for each patient, the foot being placed in that position in which its color and circulation are best.

Question: Is smoking an important factor in precipitating occlusive arteriosclerosis?

Dr. Duryee: I have already talked about the effect of tobacco in producing vasospasm. It is certainly conceivable that in occlusive arterial disease, if the insult of spasm is added, it may precipitate thrombosis. The effect of tobacco in curtailing the collateral circulation is also important. These ideas are borne out clinically by the fact that in thromboangiitis obliterans resumption of smoking by a patient who has given it up for a time often precipitates thrombosis.

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* These questions and answers, recorded by Dr. Hugh H. Hussey, were part of a panel discussion on peripheral vascular diseases of which the four preceding papers constituted a part. Presented before the Society, January 21, 1942.

QUESTION: Is sympathetic block indicated in arteriosclerosis obliterans when the only symptom is intermittent claudication?

DR. FREEMAN: This depends on whether or not there is abnormal vasoconstriction. If the patient's foot is cold, blue and sweaty; and if the patient gives a history of cold feet; and if these symptoms are relieved by alcohol, warmth or sympathetic block with novocaine; you may get a brilliant result from sympathectomy. I have seen a number of such cases. However, in the usual type of case in an older individual, you will not get much effect from sympathectomy.

QUESTION: Does lumbar sympathectomy cause impotence?

DR. FREEMAN: Absolutely not. It causes sterility but not impotence.

QUESTION: What is the present status of the use of deproteinized pancreatic or tissue extract in thromboangiitis obliterans and arteriosclerosis obliterans?

DR. DURYEE: The extract we have used is "Depropanex." This substance is an insulin-free, deproteinized pancreatic extract. In dogs it is known to reduce the blood pressure, and this fact is used as a means of standardizing the extract against adrenalin, 1 unit of Depropanex being the amount that will reduce the blood pressure of a dog to the same extent that 1 mg. of adrenalin will elevate it. Since it is a vasodilator, we feel that it may have value in the treatment of occluding arterial disease to relieve vasospasm and expedite the development of collateral circulation. Clinically, we have found that in many cases intermittent claudication and rest pain can be relieved. The extract can be self-administered by injection and is usually given in doses of 3 c.c. three times each week. We are using Depropanex widely in prolonged, chronic cases; it has no value in acute cases.

QUESTION: How soon does improvement follow the beginning of treatment with Depropanex?

DR. DURYEE: Improvement can be demonstrated by special methods after one or two doses in many cases, but real clinical improvement usually begins after 10 or more injections.

QUESTION: What is the value of sympathectomy when there is gangrene?

DR. FREEMAN: In some cases sympathectomy may precipitate gangrene or may aggravate already existing gangrene. There must be some capacity for blood flow in order to have the sympathectomy render benefit.

QUESTION: Is sympathectomy ever contraindicated?

DR. FREEMAN: Yes, when there is quite serious deprivation of blood supply because of organic arterial changes. This is the kind of case in which gangrene may follow sympathectomy.

QUESTION: Does thromboangiitis obliterans occur in negroes?

DR. VEAL: Yes, we have seen 5 or 6 cases of Buerger's disease in negroes. The pathologic specimens of the arteries in these cases offered definite proof of the diagnosis. Dr. Yater has reported these cases.

DR. DURYEE: We have a matriculant from Haiti at the New York Post-Graduate Medical School. He has shown us biopsy sections typical of thromboangiitis obliterans. These were taken from full-blooded negroes at his home.

DR. YATER: Yes, the chances are that this is not a specific disease and that it may occur as the result of different precipitating or aggravating factors in any race.

QUESTION: Does syphilis cause thromboangiitis obliterans?

DR. YATER: All the negroes Dr. Veal mentioned had syphilis, and it is possible that syphilis may be one of the factors which precipitates this condition. This remains to be settled.

QUESTION: Does an arteriogram help to differentiate Buerger's disease from arteriosclerosis? Is arteriography with thorotrast a safe procedure?

DR. VEAL: Certainly yes, to both questions. The X-ray pictures are quite typical in these two diseases. If a biopsy cannot be made, arteriography is the most specifically diagnostic procedure. As far as the safety of the procedure is concerned, I have been making arteriograms with thorotrast for 10 years, and I have never seen it cause thrombosis, precipitate gangrene, or lead to the development of a malignant lesion. I think Dr. Yater should say what he thinks of the safety of using thorotrast.

DR. YATER: They think I'm prejudiced. We are now in process of reviewing some 400 cases in which thorotrast has been used in the relatively large doses of 75 c.c. or more. The first patient, now 69 years old, injected 10½ years ago, reappeared last month in excellent health, although she still presented evidence of the chronic lymphatic leukemia she was known to have before thorotrast was injected. The film showed that practically all of the thorotrast had disappeared. Thus far I have not seen any important immediate or remote ill effects.

QUESTION: Of what value are the sulfonamide group of drugs in the treatment of peripheral vascular diseases?

DR. FREEMAN: We obtain a good effect in limiting infection by using one of the sulfonamides plus complete immobilization of the part. I remember in past days that diabetics having a streptococcal infection of a foot in which there was poor arterial circulation often had to be subjected to emergency amputation. Now with sulfanilamide and complete immobilization of the foot for 24 hours there is usually no extension of the infection. Therefore more conservative treatment can be used.

DR. DURYEE: One other angle on this question is the use of the drug locally. In large varicose ulcers the infection can be cleared up by using sulfanilamide powder on the lesion.

DR. VEAL: Also, in cases of gangrene resulting from frostbite there are often toxic symptoms resulting from local infection. Sulfanilamide given by mouth in these cases rapidly controls the infection and improves the patient.

QUESTION: What is the present consensus of the value of the Pavaex treatment?

DR. DURYEE: This apparatus is now used less and less. It is used for certain vascular emergencies, for example, arterial embolism below the elbow or below the popliteal space. Emboli that lodge higher in the arterial tree of course cannot be benefited by the Pavaex. There are also some cases of arteriosclerosis obliterans in which the boot seems to increase the circulation. It should be remembered, however, that if the collateral circulation is mainly superficial, the cuff of the machine may occlude the superficial vessels and thereby do harm. Pavaex undoubtedly has a place in therapy but rather a small one.

QUESTION: When is a sympathectomy indicated in thromboangiitis obliterans?

DR. FREEMAN: We are doing more and more of these, not to prevent the progression of the disease, because sympathectomy will not accomplish this, but because it prevents vasospasm from making a bad circulation worse. The patient can be kept generally better after sympathectomy. I have already mentioned the indications, but to repeat, whenever there is evidence of vasoconstriction such as a sweaty limb, cyanosis, coldness, or collapse of the superficial veins, and these symptoms can be relieved by warmth, alcohol, sympathetic block with novocaine, or a similar procedure, sympathectomy is indicated.

QUESTION: From a medicolegal standpoint what constitutes disability in arteriosclerosis or Buerger's disease of the lower extremity?

DR. DURYEE: This is a "headache" in peripheral vascular disease work, especially in cases in which compensation insurance is involved. The question would take a long time to answer fully, but there are three main points. If the patient has obliterative vascular disease sufficient to cause trophic changes, he is disabled; if the disease is progressing and the symptoms are limiting his activity, it is disabling; and if the peripheral vascular disease is part of a more general involvement of the heart, kidneys or other organs, it is disabling. I have had one bad experience in connection with the last of the three points. This was in a case in which I gave the opinion that a patient with peripheral arteriosclerosis was not disabled. Unfortunately, this patient had marked coronary artery and renal changes and I did not recognize this at the time.

QUESTION: What antiseptics may safely be used for ulcerations due to arterial occlusion?

DR. VEAL: In the first place, any strong antiseptic should be avoided. Boric acid solution, saline and sulfanilamide dressings are safe.

DR. DURYEE: I would add fungicides, especially potassium permanganate in a dilution of from 1 to 4,000 to 1 to 8,000. This is quite useful in cases that are complicated by epidermophytosis.

DR. YATER: I remember one poor fellow with thromboangiitis obliterans and ulceration of the foot. A resident at the hospital applied iodine to the ulcer. The gangrene spread like wildfire, and we all learned a lesson at considerable cost.

QUESTION: Of how much value is the intravenous injection of hypertonic saline solution in thromboangiitis obliterans?

DR. DURYEE: I come from New York where this method has not had much use. We have seen many cases so treated, at other clinics mainly. I have had little personal experience. Statistics seem to show that the results with hypertonic saline are excellent, but statistics are hard to appraise in this disease because the majority of cases of thromboangiitis obliterans improve with the standard, general treatment. Whether or not the saline infusions actually stimulate healing is hard to say. The results with the treatment are reported to be slow and may well be spontaneous and nonspecific.

QUESTION: What are the indications for amputation in cases of thromboganiitis obliterans?

DR. FREEMAN: There are three reasons for amputating in this disease: (1) when there is sepsis which is spreading and endangering life; (2) when there is advancing gangrene which is uncontrollable by conservative methods; and (3) when there is a useless extremity. By this last, I mean the kind of situation in a foot which required one to amputate above the heads of the metatarsals. This would leave a useless foot for walking; an artificial limb would be better, so the amputation is made higher.

QUESTION: Would you advise sympathectomies for all four extremities in severe Buerger's disease of all four extremities?

DR. FREEMAN: Yes, if there are evidences of vasoconstriction.

QUESTION: What are the common complications that may follow femoro-iliac thrombophlebitis?

DR. VEAL: Edema, varicose veins, recurrent lymphangitis and cellulitis, and ulceration are the principal sequelae. I include edema, of course, because after a time it may be truly disabling.

QUESTION: When is peripheral nerve block indicated in peripheral vascular disease?

DR. FREEMAN: I have already discussed this in my preliminary talk. To reiterate, the procedure is used in Buerger's disease to give the patient rest from pain while new vessels have a chance to develop.

QUESTION: What are the indications and value of mecholyl iontophoresis?

DR. DURYEE: The cholines are some of the best vasodilators. Mecholyl, for example, will reduce the blood pressure markedly. Because of its vasodilating action it is used for peripheral arterial disease. By introducing the mecholyl into the skin by means of a galvanic current you can localize its effect and prevent the bad side effects. Unfortunately, with this method the action of the drug is limited to the skin. Therefore it has no value for improving the deeper circulation. It is of greatest value in healing superficial ulcers and in increasing the nutrition of the skin. It has slight or no effect on deeper conditions.

QUESTION: What are the indications and value of histamine iontophoresis?

DR. DURYEE: Histamine has no advantage over mecholyl and has the disadvantage that the duration of its effect is shorter. It acts for about an hour while mecholyl acts for from 6 to 8 hours.

QUESTION: When is vein ligation advisable in cases of thrombophlebitis?

DR. VEAL: Ligation is used in cases of thrombophlebitis of the deep veins of the calf, especially the traumatic variety. This kind of process tends to spread upward and often causes embolism. Legation is also used for peripheral thrombophlebitis of the saphenous vein and for suppurative thrombophlebitis. Recently we have been ligating the femoral vein or the iliac vein in selected cases in which there is evidence of rapid propagation of a thrombus in these veins, in order to prevent pulmonary embolism.

QUESTION: Is intravenous calcium of value in the treatment of thromboangiitis obliterans?

DR. DURYEE: I have had so little experience with this that I don't know.

QUESTION: When is a sympathetic block indicated in the treatment of acute thrombophlebitis?

DR. FREEMAN: This is indicated when there is excessive pain. This pain is due to arterial spasm and is relieved by the block.

DR. VEAL: Sympathetic block should also be done when there is persistent fever, even without good evidence of arterial spasm. In this kind of case the fever promptly subsides and the patient improves more rapidly.

QUESTION: Of what importance is the sedimentation rate in following a case of thrombophlebitis?

DR. DURYEE: The sedimentation rate is purely an indication of tissue breakdown. A rapid rate in a patient with thrombophlebitis may not be due to the thrombophlebitis but to some other cause. Likewise, there may be a normal sedimentation rate in some cases. In the infectious type of thrombophlebitis with a fast sedimentation rate, one can get some indication of the progress of the patient by following the rate. If the sedimentation rate becomes progressively slower, you know that the process in the vein is subsiding.

QUESTION: When should ligation of the saphenous vein be combined with the injection treatment of varicose veins?

DR. VEAL: I have already covered this point. It should be done in the static type of varicose veins when there are incompetent valves.

QUESTION: Of what value is heparin in thrombophlebitis?

DR. FREEMAN: It is very useful, especially when there is evidence of arborization thrombophlebitis. It is also useful when there is pulmonary embolism. By means of heparin you prevent propagation of the thrombus.

QUESTION: Does a negative Perthe's test indicate that there is no obstruction of the deep veins when applied to the lower extremities?

DR. VEAL: This depends entirely on the case. In cases of thrombophlebitis when there are good collateral channels, there may be a negative Perthe's test in the presence of deep venous obstruction. In other cases a negative test may be really significant.

QUESTION: Can a patient have thrombophlebitis or phlebothrombosis without local evidence of it?

DR. FREEMAN: Yes. There are "silent" thrombi in the pelvic veins. However, I doubt that acute thrombosis in the peripheral veins occurs without local evidence such as edema, tenderness, pain, etc.

QUESTION: Would you advocate ligation of the femoral veins in a patient who has had multiple pulmonary infarctions without local evidence of phlebothrombosis in the extremities?

DR. FREEMAN: If you cannot find evidence as mentioned above or pain in the calf and popliteal space when the foot is dorsiflexed with the leg straight, I don't think so. Of course, there may be little evidence of a dangerous thrombophlebitis in the veins of the calf. Dr. Veal has already mentioned the need for ligation in this type. But I believe that there will always be some slight evidence, and when this is found ligation is indicated.

QUESTION: When should the patient who is convalescing from acute thrombophlebitis of the femoral and iliac veins be allowed out of bed?

DR. VEAL: Many will disagree with me. A clot requires only 7 to 10 days to become firmly fixed to the vein wall. I believe that after the fever is down the sooner the patient gets out of bed the better.

QUESTION: What are the limitations of oscillometric studies in peripheral vascular disease?

DR. DURYEE: The oscillometer records the pulsation of all vessels in the area under the cuff, and the major part of the pulsation comes from the larger vessels. Therefore, we may learn nothing if only the small arteries are affected. Furthermore, if the larger arteries are in an anomalous position, if the patient has hypotension, or if the large arteries are occluded but the collateral circulation is good, the oscillometer may give a false impression that the circulation is dangerously impaired. We have all seen the foot that is pulseless but warm and obviously well supplied with blood. As a single test, therefore, the oscillometer gives very little information.

QUESTION: How would you treat a case of varicose veins resulting from thrombophlebitis of the deep veins of the thigh?

DR. VEAL: I would first determine whether or not the varicose veins are an important part of the collateral circulation. The only accurate test that I know of for this is to measure the pressure in the deep veins of the leg with the patient standing and exercising. This is done by recording the popliteal venous pressure while the patient rises repeatedly on his toes. Normally, when this is done the popliteal venous pressure fluctuates from 4 to 8 mm. of mercury above and below the initial venous pressure reading. When the deep veins are obstructed the pressure builds up progressively during the period of exercise. In this latter type of case the superficial veins cannot be sclerosed without causing harm; the patient should wear elastic stockings.

Conquering of gas gangrene is indicated in two reports. Two reports indicating that gas gangrene, one of the deadly foes of the wounded, may be conquered, are contained in the current issue of *War Medicine*, published by the American Medical Association, Chicago, in coöperation with the Division of Medical Sciences of the National Research Council.

SARAH E. STEWART, PH.D., Bethesda, Md., announces the development of a toxoid that has proved to be effective in immunizing guinea pigs against the most common of the three types of organisms generally involved in gas gangrene.

Sulfanilamide or one of its derivatives has been found to successfully control experimental gas gangrene in guinea pigs, G. B. REED, PH.D., AND J. H. ORR, M.D., Kingston, Ont., report in another paper in the same issue of *War Medicine*.

"Active immunization of man against infection with bacteria of the gas gangrene group has been given little consideration," Dr. Stewart points out in the introduction to her report. "In view of the marked progress which has been made in immunization against diphtheria and tetanus by use of their respective toxoids, it seems reasonable to believe that success could be attained against gas gangrene."

Toxoid is the toxin or poisonous substance secreted by an organism, the toxicity of which has been destroyed but which is still capable of inciting the formation of antibodies.

Dr. Stewart says, "During the first World War, it was found that in the different phases of the conflict the incidence of gas gangrene varied greatly in the wounded. The highest figures were always observed at the time of active operation, chiefly at the beginning of the war, when the wounded were not collected with the usual rapidity and when treatment was necessarily delayed. Since the gas gangrene anaerobes grow rapidly, death may ensue within a few hours of injury. It is essential, therefore, if immunity to this type of infection is to be present following injury, that it be built up prior to the time of injury. . . ."

Dr. Stewart developed a Cl. perfringens toxoid which was found when injected into guinea pigs to produce an immunity against many times the minimum lethal dose of a culture of this bacteria.

Drs. Reed and Orr explain that in their investigation of the efficacy of sulfanilamide or its derivatives in relationship to gas gangrene, "the primary objective in undertaking this work was not to find a cure for gas gangrene but to devise a simple method of retarding the development of this infection until such time as a wounded man could be subjected to the well recognized surgical or medical procedures.

"The results appear to demonstrate that sulfanilamide and its derivatives, especially sulfathiazole, introduced early into infected wounds have a marked retarding effect. . . ."

President's Page

THE NURSING SITUATION

It is apparent that the present shortage of nurses can be met only by coördinated understanding and effort of physicians, nurses and the public.

To physicians will naturally fall the decision for need of hospitalization based upon the seriousness of illness, and the necessity for special examinations and expert nursing service.

The Graduate Nurses' Association is anticipating a program of training and allocating nurses for community nursing service.

The public must be made conscious of the serious responsibility of caring for minor illnesses at home, thereby allowing hospitalization for more serious sickness. If the public will take the same interest in common sense nursing that it has in first aid, this community will be outstanding as a model for other cities.

Henry R. Schreiber

Editorials

THE SCIENCE OF NUTRITION

The science of nutrition is attracting wide attention in both lay and scientific circles. The daily press and popular magazines are continually extolling its virtues, while medical journals and other scientific publications report experiments and new discoveries in this field. Few health topics have so completely captivated the popular imagination. Nutrition for health and defense is the watchword of the day.

Present interest in this subject is probably due, in part at least, to the national nutrition campaign inaugurated about a year ago by the Office of Defense Health and Welfare Services in the Federal Government—but not entirely. The science of nutrition has come into its own and is recognized by virtue of its own achievements. It has demonstrated conclusively that many forms of illness and disturbing symptoms are of dietary origin and that they are amenable to treatment on that basis. Presentation of that evidence has won for it universal recognition.

Nutrition is becoming increasingly important in medical science. That is well illustrated by recent trends in the incidence of pellagra in the Southern states. Since it has been generally recognized as a disease of dietary origin and treated on that basis, pellagra death rates have gone down by leaps and bounds. The mortality has dropped over 75 per cent since 1928. That record should be convincing evidence of the importance of nutritional therapy in medical science.

It is estimated that one third of the population subsist on an inadequate diet—not so much for want of sufficient calories but rather for lack of foods which contain the all-important dietary essentials, namely, vitamins and minerals. It is not unreasonable to assume that a large proportion of this group, particularly those past middle age, show clinical evidence of such deficiencies. Many of them can no doubt be treated successfully on a nutritional basis—the more so since the introduction of synthetic vitamins. Vitamins and minerals are important therapeutic aids if used to supplement and not to substitute for an adequate diet.

It is futile to question the importance of the science of nutrition. It is here to stay and it will occupy an increasingly important place in curative as well as preventive medicine. Nutrition as such is not a fad but there is danger that it will be dragged into that realm if left to the imagination of the uninformed and perhaps to the charlatans. That tendency is already too evident. The medical profession can prevent it from drifting in that direction by accepting and using it when indicated.

William DeKleine, M.D.

HEALTH SECURITY ADMINISTRATION

Health Security Administration of Washington was established largely through the efforts of the medical profession. Its history is so well known that repetition is not called for except to mention the functions of this agency with which many physicians are not familiar. The Administration investigates and certifies to the eligibility of persons unable to pay for medical care or the full costs of hospitalization to receive assistance.

Recently reorganized, H.S.A.'s membership now includes 24 representatives of the Medical Society and a like number each from the hospitals and the general public. All members have been selected in such a way that the Community Chest and other charitable agencies which provide funds for the care of the medical needy are not only represented but bound by mutual interests to utilize this effective service agency, which the Chest declares "has a very important and useful place in the provision of hospital service to persons unable to pay the full cost . . ."

Several weeks ago when the acute shortage of beds was put squarely up to voluntary hospitals, there was immediate response by the presidents of eleven of these institutions. It is to be noted that when faced with the necessity of immediate and unified action, the hospitals availed themselves of the services of H.S.A. Since that time, the so-called Lanham Bill now pending in Congress has been amended to provide 24 million instead of 10 million dollars for public works, including specifically hospital construction. The outlook now for additions to the bed capacity of voluntary hospitals in Washington is hopeful. The difficulty of staffing and maintaining additions to various hospitals has been recognized by the decision to place desperately needed facilities where physicians already on the staffs can be utilized with minimum expense and maximum effectiveness.

There are several other projects in which H.S.A. has coöperated with the medical profession. For example, it played an important part in the cost study of rehabilitation of Selective Service registrants in the District of Columbia, as was revealed in an article which appeared in the February issue of the MEDICAL ANNALS. MEDICAL BUREAU has received active support from the ADMINISTRATION since it was established. The ADMINISTRATION has also offered to assist with the Society's Periodic Health Examination Program in every way possible.

The vigorous manner in which H.S.A.'s Board of Trustees and its new Administrator, Mr. Willard C. Smith, are launching its 1942 program merits the approval of actively interested groups, such as the medical and dental professions, the hospitals and the several community chests and other agencies which provide funds. It warrants confidence that despite the acuteness of the hospital situation due to the present shortage of beds in voluntary hospitals, the problem of taking care of pay and non-tax-eligible patients will be met.

KEEPING OUR PERSPECTIVE

As everyone recognizes, we are passing through abnormal times. While we are at war, we are not far enough removed from peacetimes to have completely adjusted ourselves. Furthermore, the whirl of activity which precedes a war effort and the confusion attendant upon such times is liable to upset us to such an extent that we lose our perspective.

Physicians have an opportunity to note many symptoms of the times among their patients. There is, of course, the common affliction, the "jitters," and the resignation to catastrophic changes and pessimism about the future. Doleful souls say things will not be the same again and prophesy dire happenings. Lack of confidence that the nation will survive is not infrequently heard.

Now these symptoms are really not serious because their only meaning is that we have not yet settled down to the job of winning this war. Underneath this gloomy veneer there is the American spirit which will reveal itself as soon as the real test comes.

Physicians have been more occupied than nearly any other group with preparations for any eventualities which may arise. This may account for the fact that they as a class have taken the events of recent months more philosophically. At any rate, busy as they have been in the past with preparedness plans, they expect to do a great deal more, for they recognize that the undertaking upon which we have embarked has just begun.

If we keep our perspective there is no reason for pessimism, for no matter what is ahead for this country, if it has the character and strength for which it is vaunted, it will survive. Every American who believes in his country is confident that out of this conflict will come a stronger and better nation.

PERTINENT PARAGRAPHS

March Meetings

Although their activities are being increasingly devoted to the war effort, the Society's boards and committees are continuing to function as normally as possible. It is in the interest of the public and the profession that they do so. For while it is essential that nothing divert the energies of doctors from the most important task at hand, that of winning the war, the health of the people must be maintained. The medical profession, being charged with this responsibility, must not only keep abreast of scientific progress but advocate and make effective such public health measures as afford the greatest protection to the people.

Meetings held during the month of February were:

February 4	Business Meeting of Society
February 5	Medical Bureau Committee
February 6	Committee on Military Affairs
February 7	Committee on Public Policy
February 11	Scientific Meeting of Society
February 12	Committee on Public Health
February 16	Committee on Public Relations
February 17	Interprofessional Conference
February 18	Scientific Meeting of Society
February 23	Board of Censors Executive Board
February 24	Membership Committee
February 25	Section on Pathology and Laboratory Medicine Scientific Meeting of Society
February 26	Subcommittee on Mental Health Section on Pediatrics
February 27	Committee on Military Affairs

Wassermann Test Subject of Controversy

A false conception of the value of laboratory tests is quite common among laymen. An example is the belief in the infallibility of the Wassermann test for syphilis. Recently, the management of the Boeing Aircraft Company came to grips with physicians in Seattle, Washington over the use of this test. *Northwest Medicine*, the journal of the Oregon State Medical Society, Washington State Medical Association and Idaho State Medical Association, comments editorially upon the controversy as follows:

> "The Wassermann reaction has long been recognized as a useful tool in diagnosis of syphilitic infection. It remains, however, a laboratory procedure, subject to all the fallacies and errors of misinterpretations which attend any such tests. Syphilologists have long since discarded the idea that diagnosis of syphilis comes out of a test tube. Indeed, the test is constantly being relegated farther and farther into the background in favor of a careful and intelligent survey of the patient's history and physical findings."
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> "An important number of perfectly normal people, who have never been infected by the Treponema pallidum, give a positive test. Certain conditions, such as malaria, infectious mononucleosis, upper respiratory infections, vaccinia and certain serum treatments may cause false positive tests. Furthermore, it is even common knowledge among lay persons that a victim of syphilis becomes non-infectious very quickly after institution of treatment, while his positive Wassermann may persist for a long time or even indefinitely.
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> "Newer conceptions, based on sound clinical experience with thousands of cases, now indicate that there has been much overtreatment in the past and henceforth no attempt should be made to secure a negative Wasser-

mann. Moore states: 'To prolong treatment over a period of many years in the hope of reversing an irreducibly fixed positive test to negative is in many instances both unnecessary and unwise.'

"Now, in the face of all this evidence and much more the Boeing Aircraft Company insists that it shall not hire any person who has a positive Wassermann reaction. No discrimination whatever is made as to whether this may be a false positive, a persistent positive in a latent case after ample treatment or a normally positive reaction in one taking regular treatment. The management has refused to accept the opinion of its own medical department and has also flatly refused to coöperate with the state health department in its handling of such cases. It maintains this harsh and arbitrary attitude without reason or explanation, and will not allow its own medical department to use its discrimination in employing otherwise highly qualified persons who may be unfortunate enough to have a positive Wassermann."

It seems inconceivable that officials of the Boeing Aircraft Company would take such an arbitrary position without some sound reason for it. On the other hand, their failure to take the advice of their medical department is difficult to understand. While there are differences of opinion among the profession as to the value of the Wassermann test, the majority believe its use to determine the presence of syphilis is warranted. However, good judgment must be exercised here as in the application of all diagnostic procedures.

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Military Medicine Program Praised

Those on hand for the meeting devoted to Military Medicine which was held in the Medical Society's building on February 11 were well rewarded, for the program was of unusual merit. Attendance of civilian doctors was somewhat disappointing. However, approximately 200 medical officers of the Army and Navy were present. Their uniforms lent color and drama to the occasion, emphasizing how far we have come along in our participation in the war during the past year.

Lt. Col. Daniel L. Borden, M.C., U. S. A., who is Chief of the Surgical Staff at Fort George G. Meade and Past President of the Medical Society of the District of Columbia, addressed the Society on the subject, "From Civilian Practice to Military Service." His paper, as might be expected, was informative, interesting, and distinctive.

Dr. William J. Tobin, formerly stationed at Fort Benning, Georgia, illustrated his discussion of "Parachute Injuries" with colored motion pictures showing jumpers during the period of training. Surprisingly few, Dr. Tobin said, sustained severe injuries in what is undoubtedly the most hazardous branch of the military service.

This program deserved the high commendation which it received.

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Unfit Drivers

By a close vote, the Traffic Advisory Council of the District of Columbia recently decided in favor of physical examinations of applicants for drivers' licenses. The Chairman and the Secretary of the Medical Society's Committee on Automobile Accidents, upon invitation of the Council, presented their views on this subject at a meeting subsequent to the one at which this action was taken. The enormity of the task of examining all automobile drivers and the difficult position in which private physicians would be placed if they were called upon to make these examinations were pointed out. The Society's representatives agreed that theoretically examinations would be desirable. Workable plans, it was suggested, may possibly be worked out in the future. However, the Council's attention was called to the fact that physicians are now so burdened with work in connection with the war that it would be a physical impossibility for them to aid with the project.

In the light of these views, an editorial which appeared in the February issue of the *Journal of the Medical Society of New Jersey* under the caption, "Doctor's Dilemma," is of particular interest.

> "Is it a doctor's duty to report a physically unfit driver to the Motor Vehicle Department or should he keep this information confidential? Here is a real dilemma for the conscientious physician. Suppose he knows that the patient has epilepsy, coronary disease or some other condition which makes him a potential hazard behind the wheel of his car. To send this information to the Motor Vehicle Commissioner may seem like a gross breach of confidence, as well as an act apparently detrimental to the patient whose interest he is sworn to protect. On the other hand, to suppress this information is to invite a serious accident and perhaps to be party to the snuffing out of many lives.
>
> "Fortunately the New Jersey doctor is not obliged to make a decision at this time, since the Committee on Traffic Accidents wants, at the moment, only a numerical evaluation of the number of persons in the state with disabilities of this sort. There can be no objection to that, and no reason for any doctor's failure to fill out the information blank without giving names of patients. Subsequent policy can be determined only if accurate information as to the size of the problem is available. This information can be secured if the doctors of the state will continue their long-established habit of cheerfully coöperating in any project helpful to public health or public welfare."

An investigation similar to that being made by the New Jersey Society might well be undertaken in the District. It is apparent that intelligent planning is not possible until the extent of the problem is known.

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More About Periodic Health Examinations

What seems on the surface a simple undertaking often proves to be both complicated and difficult. This is true of the Periodic Health Examination Program adopted by the Society on November 5, 1941. For there are several factors which may make or break this program.

Most important is the attitude of physicians. If the Program is to succeed, they must not only look favorably upon this preventive procedure, but recognize their obligation to make adequate physical examinations. They must also coöperate with the Medical Society by using its periodic health examination form. If a physician desires to give a more extensive examination than the form calls for, that is his business. However, it will be bad for all concerned if he does less.

The same principle applies to the fee for an examination. There is no objection to it being less than stated on the form, but the physician who charges more is jeopardizing the Program.

Continuity of effort is another important factor. This must be a year in and year out program. In other words, it must be just as permanent a part of the Society's activities as the scientific program.

Of course, responsibility for the success of the Periodic Health Examination Program does not rest entirely upon the medical profession. When an effective lay educational program has been carried out, the public must respond, otherwise little will be accomplished. Obviously assistance of public health and civic groups in this phase will be needed.

Two hundred and twenty physicians have stated that they wish to be listed with the Society's office and MEDICAL BUREAU to make periodic health examinations. The Committee on Public Health considers this most encouraging. However, not a great number of those replying to the Society's communication have purchased examination forms which are obtainable at the Society's office at cost. It is essential that physicians participating in the Society's Program use these forms as they are a guide to making the examination approved by the Society.

On February 26, a communication went forward to the Society's membership enclosing a card to be given each person receiving a periodic health examination. The purpose of the card is not only to show that the examination has been performed but that the Society's form has been used. In other words, assurance is given the person examined that the physician has performed an examination in accordance with the standards adopted by the Society. The public is being informed that each individual examined should be sure to obtain a card. Neither the card nor the examination form will be sold physicians separately. They are being supplied at cost to the Society's membership.

It was recognized when the Program was first proposed that provisions must be made for the indigent. Negotiations are now under way with the HEALTH SECURITY ADMINISTRATION in an effort to have these examinations performed in clinics of local hospitals. As most physicians are already overworked, deans of local medical schools are going to be requested to make available their senior medical students for these examinations. These are only tentative plans and dependent upon the willingness of those called upon to coöperate.

Again it should be stated that this is a real opportunity for physicians in private practice to assume responsibility for an important phase of preventive medicine.

Enlist Your Dollars

Although on frequent occasions public attention has been called to the services given by physicians without thought of compensation, many still do not know, for example, that examining physicians for local draft boards are not paid, nor are those who participate in the various phases of the Civilian Defense program and many other Government undertakings. It is perhaps too much to expect that a majority of the people will ever be aware of these contributions. Nevertheless, there are those who are appreciative and do know of the generosity of the profession.

Some physicians have become disgruntled because of the general lack of appreciation of their services. However, most medical practitioners will not take the position that because they are doing as much as they are, they should do no more. The medical profession as well as all other groups will have to do more and give more as time goes on. Just now, doctors are called upon with all other citizens to enlist their dollars in "the battle for freedom." The Government is not asking for gifts. The Treasury Department is asking for loans from every citizen. It must draw upon all of the country's financial resources to supplement tax revenues and bank credits to pay the annual costs of war.

Doctors can lend their money through the purchase of Defense Savings Bonds and Stamps. The money invested in bonds increases as much as 33⅓ per cent in 10 years and when the bonds mature, they will have more dollars to spend and all sorts of products to buy. In case of an emergency, such as a possible business lull during the postwar transition period, these savings may be drawn upon by redeeming the bonds before they mature. Even so, there will be a gain for the bonds will have appreciated during the period which they were held. Whenever a need arises, those who have bonds will have a "backlog" to draw upon.

Through the Defense Savings Program, physicians can build toward security for themselves and their families. It is necessary that all help to win this war. The President has issued the challenge: "The lives of our soldiers and sailors, the whole future of this Nation, depends upon the manner that each and every one of us fulfills his obligations to this country."

Doctors and Group Hospitalization

The medical profession is credited by Dr. L. Henry Garland of San Francisco with stimulating the organization of group hospitalization plans. In an article entitled, "Hospitals and Doctors Review Blue Cross Plans," Dr. Garland writes:

> "Most, if not all, of group hospitalization or Blue Cross plans were started through the direct personal and financial assistance of the medical profession. Indeed, in many plans the first four or five hundred policies sold were purchased by physicians in order to give the plan a start. These same physicians urged their patients and

the public at large to purchase such sound coverage. They appreciated the psychological as well as the physical benefits of hospital insurance and supported these plans since their inception.

"Inasmuch as the term 'hospitalization' is assumed to cover more than 'hospital service' by some institutions, physicians have been in constant study of desirable services to be included along with hospital benefits. Physicians on hospital staffs realize that no medical services should be included *as a part* of hospital services, but that it may be wise to provide for some medical services *along with* hospital services, for the convenience and well being of the patient. When such professional services are included along with hospital services the method of reimbursing or paying the physician for his services becomes of considerable moment inasmuch as it is the public's money which is being spent, and the public desires assurance that its funds are being spent on the best type of medical care available.

"In general, the least controversial and most satisfactory Blue Cross plans have been those in which straight hospital care alone was furnished the patient; these plans are the cheapest on the market today and are well exemplified by those in Kansas City, Washington, D. C., and St. Louis. When local authorities desire to include certain medical services (such as roentgenology, clinical pathology and anaesthesiology) along with hospital services, then the following points representing the considered opinions of the American Medical Association and the American College of Surgeons should be borne in mind:

"1. The medical profession approves hospital service insurance associations which issue straight hospital service policies (for example, the hospital contract issued by Hospital Service of California and the Associated Hospital Service of Southern California in conjunction with California Physicians Service).

"2. It does not approve of any hospitalization contract which provides any medical services as a part of hospital care. Medical benefits including roentgenology, pathology, and anaesthesiology, may be provided only on a basis under which the subscriber is indemnified for these expenses.

"3. When hospital service insurance associations issue hospital service contracts which include indemnification for diagnostic medical services, it is desirable that such be specified in the description of the contract (for example: Hospital service contract and limited professional service contract). Further, it is desirable that the association issuing such contracts make specific arrangements whereby the benefits for radiology or pathology are payable on waiver by the subscriber to the physician rendering those services, or directly to the subscriber. In this manner the hospitalization association will be complying with the letter as well as the spirit of indemnification.

"4. The medical profession, through its national and state organizations, has emphasized that it does not approve or endorse any hospital service contracts which purport to provide any medical services as a part of hospital care, nor can it countenance the issuance by any hospitalization association of advertising literature which fails to indicate that payment for medical services is being made to physicians rendering such services. It is important for the welfare of the public, the hospitals, and the medical profession that a clear distinction be made between hospital service and medical service in any and all of these hospitalization insurance contracts."

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Increasing Demands on Medical Bureau As the population of the District grows, greater demands are being made on MEDICAL BUREAU. The BUREAU has become known as a source of reliable information about physicians and medical institutions. The result has been a rapid increase in the number of inquiries received as the following figures reveal.

	February 1941	June 1941	November 1941	February 1942
Requests for names of physicians....	187	278	338	572

When it is taken into account that every time the BUREAU receives a request for the name of a physician, the operator gives the names of three, the extent of this service is better appreciated. Members of the Society who are interested are invited to examine the classified list of physicians and the record kept of doctors whose names are given.

Frequently the Society's office receives communications from physicians expressing thanks for patients referred to them. The BUREAU, of course, does not know to whom the patient goes for the caller makes his choice from the names given him.

Regardless of what the future holds, the BUREAU has proved its worth. It deserves and should receive adequate financial support, for it not only renders a worthwhile service to the profession but to the public as well.

"The Story of H.S.A." Dr. Herbert P. Ramsey, a member of the Board of Trustees of Health Security Administration, recently addressed the Medical Society on "The Story of H.S.A." The material gathered by Dr. Ramsey for his review of H.S.A. is most comprehensive. It deals with its corporate structure, administrative set-up, clientele, function, sources of funds, "salvage," budget, philosophy of operations, taxation of hospitals, formula, the master plan, and the voluntary system.

In reference to the voluntary system, Dr. Ramsey has this to say:

"The attack on the voluntary system of medical care, aside from actual war needs, will very likely not proceed directly to a regimentation of civilian physicians but rather along the line of controlling hospitals and hospitalization to such a large extent that physicians must in their hospital practice be subservient to such controls. It is not a question of whether what will then be furnished in hospitalization and medical care will be as good as what is now provided. I would agree with you that it would be definitely and vastly inferior but the public is in a frame of mind to be sold the idea of government control and this will have political backing."

Many physicians will not agree with these conclusions; however, Dr. Ramsey's arguments are deserving of serious consideration, for they are the result of firsthand study and long experience.

A limited supply of copies of Dr. Ramsey's address are available in the Society's office to those who are interested.

NOMINATIONS FOR ELECTIVE OFFICES

The following nominations for elective offices were made in the order shown at the business meeting of the Medical Society on March 4, 1942:

**For President-elect*	Fred R. Sanderson John A. Reed
For First Vice President	Thomas S. Lee
For Second Vice President	Alma Jane Speer
For Member of Executive Board	Henry R. Schreiber
For Member of Board of Censors	R. Lomax Wells

Elections to the above offices will be held at the annual business meeting, May 6, 1942.

MEMBERSHIP

The following applicants for membership were duly elected to membership at the business meeting, March 4, 1942:

Active Members

William D. Claudy, Wardman Park Hotel
William James Collins, Medical Science Building
George R. Farrell, 1830 Eye Street, N. W.
S. Arthur Linde, 1835 Eye Street, N. W.
M. Corle Miller, 1205 Farragut Street, N. W.
James Lloyd Mims, 1463 Rhode Island Avenue, N. W.
Marshall de G. Ruffin, 1835 Eye Street, N. W.
Bertram F. Schaefer, 3806 Benton Street, N. W.

Associate Members

Ralph G. Beachley, 3119 17th Street, N., Arlington, Va.
Eugenia E. Murphy, 2508 Columbia Pike, Arlington, Va.

The following applicants for membership will be voted on at the business session, April 8, 1942:

For Active Membership

Edmund Francis Daley, Georgetown University—1937
Winfred Overholser, Boston University—1916
George C. Ruhland, Wisconsin College of Physicians and Surgeons—1904
Edward J. Stieglitz, Rush Medical College—1923

For Associate Membership

Brooks G. Brown, Jr., George Washington University—1939
Alfred Golden, Washington University (St. Louis)—1938

The following applicants for membership will be voted on at the business meeting, May 6, 1942:

For Active Membership

C. Willard Camalier, Jr., Duke University—1938
Thomas A. Wildman, George Washington University—1928
Eugene L. Willard, George Washington University—1940

For Associate Membership

Waldo Briggs Moyers, University of Maryland—1931
Leonard G. Rowntree, University of Western Ontario Medical School—1905

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* One to be elected.

War Section

POLICE PASSES AND AUTO STICKERS FOR PHYSICIANS DURING AIR RAIDS

Police passes and auto stickers which will permit physicians in active practice to pass through police lines during air raids are now obtainable at the Medical Society's office. Application must be made in person and passes and stickers signed for. They are valid only during actual air raids and cannot be used in other emergencies.

Physicians who are members of Medical Field Units will receive their passes and stickers from their Unit Leaders.

MEMBERS IN MILITARY SERVICES

According to the Society's records, there were 83 members of the Medical Society of the District of Columbia in the military services on March 14, 1942. Below appears a list of these members together with the date they began active duty. The addresses of members in the Army are also included, but this information cannot be publicized for those in the Navy. If there are omissions, or changes in the rank and location, members are requested to report them to the Society's office.

Name	*Date of Entering Service*	*Location*
Theodore J. Abernethy, M.C. (U.S.A.)	Jan. 29, 1942	Station Hospital, Camp Claiborne, La.
Capt. Arnold Albert, M.C. (U.S.A.)	June 2, 1941	Port of Embarkation, New York, N. Y.
Major Walter Atkinson, M.C. (U.S.A.)	March 5, 1941	Station Hospital, Fort Eustis, Va.
First Lt. E. Herbert Bauersfeld, M.C. (U.S.A.)	Feb. 15, 1941	Fort Belvoir, Va.
Capt. William H. Beard, M.C. (U.S.A.)	Sept. 1, 1941	Langley Field, Va.
Lt. Joseph F. Belair, M.C. (U.S.N.R.)	April 24, 1941	
Major Robert A. Bier, M.C. (U.S.A.)	Oct. 21, 1940	Medical Division, Selective Service System, Washington, D. C.
Lt. Comdr. Robert M. Bolton, M.C. (U.S.N.R.)	Feb. 15, 1941	
Lt. Col. Daniel L. Borden, M.C. (U.S.A.)	July 1, 1941	Station Hospital, Fort Meade, Md.
Lt. Comdr. John L. Cardwell, M.C. (U.S.N.R.)	Nov. 1940	
Capt. Frank T. Cawley, M.C. (U.S.A.)	June 15, 1941	Fort Belvoir, Va.
Capt. Morris Chase, M.C. (U.S.A.)	April 1, 1941	Camp Lee, Va.
Major Austin B. Chinn, M.C. (U.S.A.)	March 1, 1942	Fort Stark, Charleston, S. C.
Lt. Comdr. Roger S. Cohen, M.C. (U.S.N.R.)	June 9, 1941	
Major Worth B. Daniels, M.C. (U.S.A.)	Jan. 24, 1942	Station Hospital No. 2, Fort Bragg, N. C.
Capt. Arthur Dick, M.C. (U.S.A.)	Jan. 2, 1941	Station Hospital, Fort Meade, Md.
Lt. Col. Mazarin C. Dollman, M.C. (U.S.A.)	Feb. 10, 1941	Fitzsimons General Hospital, Denver, Colo.
First Lt. John F. Dominick, M.C. (U.S.A.)	March 7, 1941	Air Corps, Goodfellow Field, San Angelo, Texas
First Lt. George R. Farrell, M.C. (U.S.A.)	Jan. 12, 1942	Indiantown Gap, Pa.
Lt. Irvin Feldman (jg), M.C. (U.S.N.R.)	March 28, 1941	
Major Stuart O. Foster, M.C. (U.S.A.)	Feb. 14, 1942	Fort Belvoir, Va
Major Elmer W. Fugitt, M.C. (U.S.A.)	Jan. 2, 1941	Norfolk Naval Base, Portsmouth, Va.

Name	*Date of Entering Service*	*Location*
Lt. Comdr. O. Hugh Fulcher, M.C. (U.S.N.R.)	May 1, 1941	
Lt. Edward T. Gary, M.C. (U.S.N.R.)	June 13, 1941	
Lt. Frank B. C. Geibel, M.C. (U.S.N.R.)	Dec. 9, 1940	
Lt. James H. Gillen, M.C. (U.S.N.R.)	Nov. 15, 1941	
Capt. Edward J. Grass, M.C. (U.S.A.)	Feb. 1, 1941	Camp Shelby, Miss.
Lt. Col. A. Clagett Gray, M.C. (U.S.A.)	Nov. 13, 1940	State Medical Officer, Selective Service for the District of Columbia
Capt. Luther W. Gray, M.C. (U.S.A.)	March 12, 1942	LaGarde General Hospital, New Orleans, La.
Lt. Col. Stewart M. Grayson, M.C. (U.S.A.)	Jan. 4, 1941	Fort Lewis, Seattle, Wash.
Lt. Milton M. Greenberg (jg), M.C. (U.S.N.R.)	March 28, 1941	
Capt. Henry A. Grennan, M.C. (U.S.A.)	March 1, 1942	Fort Bragg, N. C.
Capt. Malcolm D. Harrison, M.C. (U.S.A.)	Nov. 12, 1940	General Dispensary, 437 P. O. Bldg., Baltimore, Md.
Major Clayton H. Hixson, M.C. (U.S.A.)	Feb. 1, 1941	Camp Lee, Va.
Lt. Comdr. Raymond T. Holden, M.C. (U.S.N.R.)	Feb. 21, 1942	
Lt. Comdr. Gerald A. Hopkins, M.C. (U.S.N.R.)	June 16, 1941	
Lt. Comdr. Henry A. Hornthal, M.C. U.S.N.R.)	Dec. 12, 1940	
First Lt. C. Stanley Huntington, M.C. (U.S.A.)	Oct. 28, 1941	Walter Reed General Hospital, Washington, D. C.
Major Bernard L. Jarman, M.C. (U.S.A.)	Feb. 1, 1942	Air Corps, Washington, D. C.
Capt. Howard Katzman, M.C. (U.S.A.)	Sept. 29, 1941	
Lt. Comdr. Elmer Klein, M.C. (U.S.N.R.)	April 1, 1941	
Comdr. Don Knowlton, M.C. (U.S.N.R.)	Nov. 7, 1940	
Major Edward A. Krause, M.C. (U.S.A.)	March 3, 1941	Station Hospital, Fort Story, Va.
First Lt. Benjamin P. Lafsky, M.C. (U.S.A.)	March 15, 1941	28th Surgical Hospital, San Francisco, Calif.
Lt. Zigmond M. Lebensohn (jg), M.C. (U.S.N.R.)	July 15, 1941	
Lt. Comdr. Leslie K. MacClatchie, M.C. (U.S.N.R.)	March 17, 1941	
Lt. Comdr. Marvin M. McLean, M.C. (U.S.N.R.)	Sept. 3, 1940	
Major Russell McNitt, M.C. (U.S.A.)	Feb. 7, 1941	Fitzsimons General Hospital, Denver, Colo.
First Lt. Albert E. Meisenbach, M.C. (U.S.A.)	Aug. 8, 1941	Sheppard Field, Wichita Falls, Texas
Capt. Matthew Mendelsohn, M.C. (U.S.A.)	April 17, 1941	
Capt. Ernest Michaelson, M.C. (U.S.A.)	Dec. 1, 1940	Medical Department Replacement Center, Camp Robinson, Little Rock, Ark.
Lt. Reginald H. Mitchell, M.C. (U.S.N.R.)	March 17, 1941	
Lt. Comdr. Henry A. Monat, M.C. (U.S.N.R.)	Jan. 21, 1942	
Capt. Joseph M. Moore, M.C. (U.S.A.)	April 18, 1941	Letterman General Hospital, San Francisco, Calif.
Major Edward C. Morse, M.C. (U.S.A.)	Jan. 6, 1941	
Lt. Comdr. L. Conner Moss, M.C. (U.S.N.R.)	Feb. 3, 1941	
Lt. Arthur J. Mourot, M.C. (U.S.N.R.)	June 9, 1941	
Lt. Benjamin J. Mundell (jg), M.C. (U.S.N.R.)	March 12, 1941	
Lt. Comdr. Raymond W. Murray, M.C. (U.S.N.R.)	Nov. 15, 1940	
Capt. Harry B. Orleans, M.C. (U.S.A.)	Feb. 8, 1941	Fort Belvoir, Va.
Lt. Comdr. Albert E. Pagan, M.C. (U.S.N.R.)	Aug. 25, 1940	
Capt. John H. Peacock, Jr., M.C. (U.S.A.)	Feb. 1, 1941	Fort Belvoir, Va.
Major Ivy A. Pelzman, M.C. (U.S.A.)	Feb. 20, 1941	Fort Belvoir, Va.
First Lt. William Raffel, M.C. (U.S.A.)	July 1, 1940	Station Hospital, Camp Wheeler, Ga.
First Lt. Thomas J. Ready, M.C. (U.S.A.)	April 1, 1941	
Capt. Hilbert S. Sabin, M.C. (U.S.A.)	March 11, 1942	O'Reilly General Hospital, Springfield, Mo.
Capt. J. Thomas Schnebly, M.C. (U.S.A.)	July 1, 1941	Walter Reed General Hospital, Washington, D. C.
First Lt. John B. Smith, M.C. (U.S.A.)	April 7, 1941	15th Evacuation Hospital, Fort Meade, Md.
Capt. Luther H. Snyder, M.C. (U.S.A.)	March 14, 1941	Station Hospital, Fort Belvoir, Va.
First Lt. Philip A. E. Stebbing, M.C. (U.S.A.)	March 10, 1942	Stark General Hospital, Charleston, S. C.
Lt. Col. J. Duerson Stout, M.I. (U.S.A.)	March 5, 1941	Army Medical Center, Washington, D. C.
Major F. Daniel Suttenfield, M.C. (U.S.A.)		

Name	*Date of Entering Service*	*Location*
First Lt. John A. Swartwout, M.C. (U.S.A.)	March, 1941	
Major S. Ross Taggart, M.C. (U.S.A.)	Feb., 1941	Fort Meade, Md.
Lt. J. Wix Thomas, M.C. (U.S.N.R.)	June 18, 1940	
First Lt. J. Lawn Thompson, Jr., M.C. (U.S.A.)	June 2, 1941	Station Hospital, Fort Belvoir, Va.
Capt. George Tolstoi, M.C. (U.S.A.)	Oct. 15, 1940	Station Hospital, Fort Monroe, Va.
Lt. Frank H. Towner, M.C. (U.S.N.R.)	Feb. 1, 1942	
Capt. John W. Trenis, M.C. (U.S.A.)	March 6, 1942	O'Reilly General Hospital, Springfield, Mo.
Capt. Maurice van Kinsbergen, M.C. (U.S.A.)	March 1, 1941	Station Hospital, Mitchell Field, Long Island, N. Y.
Capt. Joseph J. Wallace, M.C. (U.S.A.)	June 2, 1941	Lawson General Hospital, Atlanta, Ga.
First Lt. Albert M. Wheeler, M.C. (U.S.A.)	April 1941	Fort Knox, Ky.
Capt. Paul Wilner, M.C. (U.S.A.)	April 1, 1941	Examination Station, Fort Myer, Va.

Under date of February 13, Mr. William E. Leahy, D. C. Director of Selective Service, was instructed by General Lewis B. Hershey, National Director, Selective Service System, to accept applications from physicians, dentists and facilities (hospitals) to participate in the physical rehabilitation program. General Hershey stated that Mr. Leahy would undoubtedly wish to secure recommendations from his medical and dental advisers as to qualified personnel and facilities.

Mr. Leahy immediately requested Lt. Col. A. Clagett Gray, State Medical Officer, to confer with the Medical Society's Committee on Military Affairs. At a meeting which was called to consider this matter, it was agreed that physicians who had served as examining physicians for local boards and the Army Examining Station at Fort Myer and as members of Medical Advisory Boards should be given first opportunity to make application for appointment as Designated Physicians in connection with the rehabilitation program. Physicians who desire to participate should respond promptly to the letter and questionnaire which they will receive from Headquarters of D. C. Selective Service.

Mr. Leahy makes it clear that physicians other than those who have been serving on Selective Service boards and who desire to participate should apply to Headquarters.

Invitations have been sent to the following hospitals in order that they may apply for designation as approved facilities:

Central Dispensary & Emergency Hospital
Doctors Hospital
Eastern Dispensary & Casualty Hospital
Episcopal Eye, Ear & Throat Hospital
Freedmen's Hospital
Gallinger Municipal Hospital
Garfield Memorial Hospital
Georgetown University Hospital
George Washington University Hospital
National Homeopathic Hospital
Providence Hospital
Sibley Memorial Hospital
Washington Sanitarium & Hospital

NUTRITION PROGRAM

Studies made by the U. S. Department of Agriculture indicate that 30 per cent of the people in this country are inadequately fed to maintain good health. The studies show that they do not suffer so much from lack of sufficient calories, although that also plays a part, but rather from lack of the right kind of food. They do not get enough of the protective foods, namely, milk, fruit, vegetables, and whole grain cereals. As a result, they suffer from what is sometimes called "hidden hunger"—a need for the all-important vitamins and minerals essential for good health.

Leaders in nutrition and public health are making a determined effort through a campaign of education to reach not only the 30 per cent who are known to be inadequately fed, but the entire population, so that everyone may have an opportunity to know what the basic requirements are for an adequate diet.

This campaign is now in full swing. It is sponsored and directed by the Federal Government through the Division of Nutrition in the Office of Defense Health and Welfare Services under the Federal Security Administrator, the Hon. Paul V. McNutt. Mr. M. L. Wilson, Assistant Director in Charge of Nutrition, is general director and coördinator of the program. He is assisted by Dr. W. H. Sebrell, Deputy Assistant Director, Dr. Helen S. Mitchell, principal Nutritionist, and by other technical advisers.

The campaign was inaugurated by a National Nutrition Conference held in Washington last May. The country has since been divided into regional areas and a regional coördinator and nutritionist will be assigned to each area to facilitate administration of this extensive program. All the states have organized nutrition committees which in turn will organize local committees in their respective counties and cities. A determined effort will be made to broadcast practical nutrition information to every hamlet in the country and to enlist the coöperation of every agency, public and private, commercial and non-commercial.

Mrs. Helen M. Monroe is Chairman of the Nutrition Service Committee for the District of Columbia. She is serving under the immediate direction of Mr. George Parker, Regional Coördinator, and Miss Eleanor Enright, Regional Nutritionist for the District and neighboring states. Some twenty-four local agencies have appointed a representative to serve on this committee with Mrs. Monroe. Dr. William DeKleine was appointed by the Executive Board of the Medical Society of the District of Columbia.

This local committee will engage in a survey of local needs and an educational program. Physicians are urged to offer their services in whatever way they can to enhance this program, by speaking before lay groups, by distributing appropriate material, by displaying posters in their offices, and by personal contact with patients. An attractive poster will be mailed to each physician in the near future.

NEW ADMINISTRATOR OF H.S.A.

A leader in civic affairs in the District of Columbia for more than twenty years, Willard C. Smith, who succeeded Ross Garrett as Administrator of HEALTH SECURITY ADMINISTRATION on January 1, 1942, is well equipped for his new duties.

Mr. Smith received his Bachelor of Science degree in education from Illinois State Normal University. Later he did postgraduate work in sociology and political science at the University of Chicago. In 1917 he entered military service and was sent overseas with the Sanitary Corps. After the Armistice he was detailed to the Chief Engineer of the A.E.F. to supervise installation of a public water supply for the city of Bourges, France. He obtained an Army discharge as hospital sergeant in Paris in September 1919 to accept service with the American Red Cross, which conducted a typhus fever expedition to northwest Russia and the Baltic provinces.

In 1920 Mr. Smith returned to America and entered the U. S. Public Health Service where he served as Assistant Educational Director of the Division of Venereal Diseases, later as investigator and statistician. He was transferred to the U. S. Census Bureau in 1929 as Assistant to the Chief Statistician, Division of Vital Statistics, later becoming Assistant Chief Statistician for Population. In 1937 he transferred to the Social Security Board as Chief of Vital Statistics and Population, Bureau of Old Age Insurance. He resigned from Government service in 1940.

Among the offices he has held in civic organizations are the following: Secretary and organizer of the District of Columbia Social Hygiene Society; President of the Monday Evening Club; Vice President of the District of Columbia Tuberculosis Association (now Secretary); President of the Washington Council of Social Agencies; and collaborator in the U. S. Public Health Service survey of official public health facilities in the District of Columbia.

Willard C. Smith
New Administrator, H.S.A.

Mr. Smith is a member of the American Academy of Political and Social Science, the Population Association of America, the American Hospital Association, and the American Public Health Association.

Few men are as well qualified to direct the affairs of Health Security Administration as Mr. Smith. His choice would seem to be a most fortunate one.

WOMAN'S AUXILIARY NOTES

The concert by the Men's Glee Club of Duke University, under the sponsorship of the Woman's Auxiliary to the Medical Society of the District of Columbia, will be held on Tuesday, March 31 at 8:30 p.m., in the Medical Society's auditorium. Doctors are invited to accompany their wives to this concert as it promises to be an excellent one.

Dr. A. Magruder MacDonald gave a very interesting and enlightening talk on the duties of the Coroner's Office at the February meeting. During the business session which followed it was voted to give $25 to the plasma and serum bank of Children's Hospital, and $50 to a needy doctor.

Haddon Hall, Atlantic City, New Jersey, will be the headquarters for the Annual Meeting of the Woman's Auxiliary to the American Medical Association, June 8–12, 1942.

Auxiliary members who took the Red Cross First Aid Course at the Medical Society's building recently were pleased to learn that the entire class will receive certificates showing satisfactory completion of the Standard Course.

Mrs. E. Leonard Goodman,
Publicity Chairman.

MEETINGS

Wednesday, April 8

The Washington Heart Association will present the following program:

"Cardioangiography—the X-ray Visualization of the Heart Chambers and Great Vessels by Contrast Substance." Isidore Shulman, M.D. Discussion will be led by Bernard J. Walsh, M.D.

"Incomplete Rupture of the Aorta—a Cause of Cardiac Pain and Cardiac Murmurs." Thomas M. Peery, M.D., Assistant Professor of Pathology, George Washington University School of Medicine. Discussion will be led by John A. Reisinger, M.D.

Wednesday, April 15

Progress in Maternal Care

The Obstetrical Board will furnish the following program:

Report of the Obstetrical Board. Herbert P. Ramsey, M.D., *Chairman*; Assistant Professor of Obstetrics and Gynecology, George Washington University School of Medicine

"Responsibilities of the Hospital Obstetric Staff Conference in Relation to the Problems of Maternal Welfare." Philip F. Williams, M.D., F.A.C.S., Assistant Professor of Obstetrics, University of Pennsylvania School of Medicine; for ten years Chairman of the Committee on Maternal Welfare of the Philadelphia County Medical Society.

"The County Maternal Welfare Committee; Possibilities for Postgraduate Education." HARVEY B. MATTHEWS, M.D., F.A.C.S., Clinical Professor of Obstetrics and Gynecology, Long Island College of Medicine; Attending Obstetrician and Gynecologist, Methodist and Long Island College Hospitals of Brooklyn, N. Y.

"Obstetrical Care in the United States." EDWIN F. DAILY, M. D., Director, Division of Health Services, Children's Bureau, U. S. Department of Labor.

Wednesday, April 22

The Section on Gastroenterology will present the following program:

"Mechanism and Significance of Abdominal Pain." HENRY LEROY BOCKUS, M.D., F.A.C.P., Professor of Gastroenterology, University of Pennsylvania Graduate School of Medicine.

Wednesday, April 29

PRESIDENT'S NIGHT

NEWS AND PERSONALS

The Second American Congress on Obstetrics and Gynecology will be held in St. Louis from April 6 to 10, 1942. It is expected that this meeting will be even more successful than the first Congress which met at Cleveland several years ago. The Congress, which is sponsored by the American Committee on Maternal Welfare, covers the fields of obstetrics and gynecology, from the practical as well as the public health point of view, and is intended for the general practitioners and nurses who have an interest in the included specialties as much as for the specialists themselves.

A special feature of this Congress will be a daily consultation service at 3:30. About 50 nationally known physicians will make themselves available for fifteen-minute consultations, through a registration system, to individual practitioners who may desire such advice in their specific problems.

Membership in the American Committee on Maternal Welfare is necessary for attendance at the Congress. Application for membership should be made to the Committee headquarters at 650 Rush St., Chicago, Ill. The annual membership fee is $5.00.

The American College of Physicians will hold its 26th Annual Session in St. Paul, Minn., April 20–24.

The American College of Surgeons announces its Second Series of War Sessions for all members of the medical profession and executive personnel of hospitals in the United States. On March 23 participants from North Carolina, South Carolina and Virginia will meet in Durham, N. C., at the Washington Duke Hotel. On March 25 participants from Maryland and the District of Columbia will meet in Baltimore at the Lord Baltimore and Belvedere Hotels. Representatives of the United States Office of Civilian Defense and the Procurement and Assignment Service of the Office of Defense Health and Welfare Services will address the sessions. Joint and separate meetings will be held for members of the medical profession and for hospital representatives. Prominent speakers in both fields will lead discussion on the treatment of war wounds, and on war and civilian defense as they affect hospitals.

The American Psychiatric Association, through its President, Dr. J. K. Hall of Richmond, Va., announces a contest for the design of an emblem to be used in its centennial celebration in 1944. Prizes amounting to a total of $500 will be awarded. Three prizes of $100 each will be awarded for the three best drawings, and an additional $200 will be paid for the one selected from these three as most suitable for the purpose.

Drawings should be sent to the American Psychiatric Association, 9 Rockefeller Plaza, New York City, to reach that office not later than April 15. The design may be executed in any medium. Although the artist is free to use any ideas he deems suitable, the design should represent the aims of the A. P. A., its purpose in the study of mental diseases, social and cultural importance. It is therefore suggested that the artist write to Dr. Gregory Zilboorg, 14 East 75th Street, New York City, for an explanatory folder containing detailed information.

The American Academy of Pediatrics, Region I, will convene at the Bellevue Stratford Hotel in Philadelphia, April 1, 2 and 3.

The Ohio State Medical Association will hold its 1942 Annual Meeting in Columbus, Ohio, April 28, 29 and 30.

The 1940 Convention for the Revision of the Pharmacopoeia of the United States of America will reconvene at the Hotel Statler, Cleveland, Ohio, on April 7, 1942, at which meeting the Committee on Constitution and By-Laws will submit a proposed revision of the Constitution and By-laws.

The Tenth Annual Postgraduate Clinic of George Washington University School of Medicine was held February 20 and 21 at 1335 H Street, N. W. The Clinic opened on Friday morning with grand ward rounds at Gallinger Municipal Hospital, Dr. Walter A. Bloedorn presiding. Participants in the afternoon and evening sessions included Dr. Robert A. Ross of Duke University School of Medicine, Dr. Frederick H. Falls of the University of Illinois College of Medicine, Dr. Clifford B. Lull of Jefferson Medical College, and Dr. Samuel M. Dodek of George Washington University School of Medicine. On Saturday morning Dr. Elliott P. Joslin, Clinical Professor of Medicine, Emeritus, Harvard University Medical School, addressed the meeting on "The Treatment of Diabetes Mellitus in 1942."

The outstanding feature of the two-day session was the Symposium on War Medicine, Saturday afternoon, when the following papers were presented:

"Air Raid Medical Administration in England," Dr. Huntington Williams, Commissioner of Health, Baltimore; member of the American Civilian Defense Mission to England.

"The Modern Treatment of Burns," Comdr. E. Harvey Cushing, Medical Corps, U. S. Naval Reserve; formerly Special Observer in England, U. S. Navy.

"The Mass Manifestations of Infectious Disease as Affected by Wartime Measures in England," Dr. John R. Mote, Assistant Director, British Purchasing Commission; formerly Acting Medical Adviser, American Red Cross in London.

"Mass Immunization," Captain Charles S. Stephenson, Medical Corps, U. S. Navy; formerly Naval Observer in England, attached to the United States Embassy.

"Prevention and First Aid Treatment of Casualties from Chemical Warfare Agents," Major Harry F. Wilson, Medical Corps, U. S. Army; Office of the Chief, Chemical Warfare Service.

The meetings closed with the 16th Annual Banquet and Alumni Reunion of George Washington University Medical Society. Dr. Arnold McNitt, Banquet Chairman, acted as toastmaster in the absence of the President, Dr. Howard F. Kane, who was ill. Sir Girja Shankar Bajpai, Agent General for India in the United States, was the principal speaker. A picture of the Class of 1912 was presented to the School by Dr. Oscar B. Hunter and accepted by Dean Walter A. Bloedorn. The banquet was attended by several hundred alumni and guests.

The Section on Ophthalmology and Otolaryngology will meet March 20 at the Cosmos Club. Dr. A. C. Furstenberg, Dean and Professor of Otolaryngology, University of Michigan Medical School, will speak on "Acute Suppurations of the Mouth, Pharynx and Cervical Regions."

The Section on Pediatrics met February 26 at the Medical Society's building. Dr. Rex E. Buxton, Director of the Washington Institute of Mental Hygiene, addressed members on the subject, "Pediatric Psychiatry."

The Section on Neurology and Psychiatry met at the Society's building, March 5. Dr. Othmar Solnitzsky, Professor of Anatomy, Georgetown University School of Medicine, showed movies of interesting neurologic cases. Dr. Benjamin Karpman, Senior Medical Officer of St. Elizabeths Hospital, spoke on "Blitz-Psychotherapy"—an attempt at utilizing shorter methods in psychotherapy.

Due to increasing demands on the physician's time in connection with the Red Cross First Aid Program and Emergency Civilian Defense, engagements made through the **Speakers' Bureau** have necessarily been curtailed. However, a number of groups have been addressed by Society members during the winter months as the following list will show:

October 16, 1941—Red Cross Class in Home Nursing
  "Mental Hygiene," Dr. Paul J. Ewerhardt
October 31, 1941—Red Cross Class in Home Nursing
  "Mental Hygiene," Dr. Robert H. Groh
November 12, 1941—Columbia Hospital Class for Expectant Fathers
  "Problems of Pregnancy," Dr. Jerome F. Crowley
February 20, 1942—Petworth Woman's Club
  "Nutrition in Defense," Dr. William DeKleine
March 6, 1942—Red Cross Class in Home Nursing
  "Social Diseases," Dr. Darrell C. Crain
March 20, 1942—Class in Disaster Information Work
  "What Every Person Should Know about the Emergency Treatment of Shock," Dr. Philip A. Caulfield

The Clinico-Pathological Society will hold its Annual Meeting at the Chevy Chase Club on Tuesday, April 7. Dinner will be served at 7:30 p.m., following which Capt. C. S. Stevenson, Medical Corps, U. S. Navy, will present an illustrated lecture entitled "Military Medical Observations in England." A golf tournament and putting contest for all members of the Society will be held the same afternoon at the Chevy Chase Club.

Dr. Carl Voegtlin was host to the Society on March 3. Case reports were presented by Drs. Edward B. Brooks, John W. Burke and Lewis C. Ecker.

The Washington-Baltimore Psychoanalytic Society will hold its next meeting in the Medical Society's building, April 11. Dr. Clara Thompson of New York City will speak on "Cultural Pressures in the Psychology of Women."

At the March meeting, which was held in Baltimore, Dr. LeRoy M. A. Maeder of Boston addressed the group on "Clinical Criteria of Normal and Abnormal Behavior: a Problem in Psychoanalytic Technic."

Col. George Russell Callender, Assistant Commandant of the Army Medical Center, was the **Smith-Reed-Russell lecturer** on February 11 at the George Washington University School of Medicine. The title of his lecture was "Diarrheal Diseases." Following the address, **Dr. Roger M. Choisser** entertained in his honor at the Army-Navy Club.

The Washington Ophthalmological Society met March 2 at the Episcopal Eye, Ear and Throat Hospital. In addition to case presentations the following program was presented: "Retinal Rest Periods," Dr. Sterling Bockoven; "Clinical Pathology of the Cornea," Dr. Benjamin Rones; color slides of "Anterior Eye Diseases," Dr. Richard Wilkinson.

At the luncheon meeting of the **Council of Social Agencies,** January 12, Dr. George C. Ruhland, District Health Officer, led a panel discussion on "Hospital Facilities for Our Growing Population—an Emergency Situation Affecting Every Resident of the Metropolitan Area." The following representatives from various fields interested in this subject participated in the program: Mr. George St. John Perrott, Chairman, Health Division, Council of Social Agencies; Dr. Herbert P. Ramsey, Chairman of the Medical Society's Obstetrical Board; Dr. Edgar C. Bocock, Superintendent, Gallinger Municipal Hospital; Mr. O. K. Fike, Superintendent, Doctors Hospital; Dr. Ralph B. Beachley, Director of Health and Welfare, Arlington County, Va.; Dr. W. Ross Cameron, Regional Medical Officer, Third Civilian Defense Area.

Dr. Edgar W. Davis addressed the **Louis Mackall Medical Society,** February 19, on "Cystic Diseases of the Lung." He also showed motion pictures of the surgical removal of a cystic lung taken at Garfield Hospital under his direction.

At the meeting of the **Executive Board,** January 26, **Dr. Herbert P. Ramsey** was appointed Chairman of the Subcommittee on Maternal Welfare. **Dr. C. B. Conklin** was appointed a member of the Advisory Committee to the Summer Round-up of Children, which appointment was made at the request of the D. C. Congress of Parents and Teachers. The Board also voted its approval to the appointment of **Dr. F. X. McGovern** as Chairman of the local Procurement and Assignment Service by the Federal Security Administrator.

Physicians' Hospital, Inc., a stock company organized by the doctors of Fauquier and surrounding counties to meet a community need, opened its newly acquired hospital on Friday, February 13. Dr. M. B. Hiden acted as agent for the physicians in purchasing the building and grounds of the former Fauquier County Hospital. The hospital is completely equipped for the care of medical, surgical and obstetrical patients, and has 25 patients' beds as well as nursery facilities. Staff privileges in the new hospital will be open to physicians in Fauquier and surrounding counties and to recognized consultants from nearby cities. At present there is no arrangement for handling charity cases, but it is hoped that some independent organization will make funds available for the care of indigent cases.

Dr. John A. Reed addressed a number of groups during the past month in connection with his office as Chief of Emergency Medical Services for Civilian Defense in the District of Columbia: January 9, 250 nurses and doctors at Freedmen's Hospital; February 3, the Women's Medical Society, which was attended by 50 women physicians; February 17, a luncheon meeting of the Health Committee of the Washington Board of Trade, where he also discussed the new Periodic Health Examination Program; February 17, evening, Sisters of the Academy of Visitation of Georgetown; February 19, the American Red Cross Canteen Units at the D. A. R. Hall.

Dr. Winfred Overholser gave an address on "The Function of the State Hospital as an Educational and Social Agency" before the 38th Annual Congress on Medical Education and Licensure at the Palmer House, Chicago, February 16 and 17. **Dr. George C. Ruhland** was also present at this meeting and spoke on "Licensure Problems in the District of Columbia."

Dr. William E. Graham, formerly with the United States Health Service, assumed office as Director of the Venereal Disease Division of the District Health Department on February 5. Dr. Graham served with the Federal agency from 1934 to 1937, specializing in venereal disease work.

Dr. Joseph S. Wall and Dr. William F. Burdick participated in radio programs in connection with the campaign for the blood bank of Children's Hospital. Dr. Burdick spoke over Station WINX on Friday, February 13, and Dr. Wall was heard over WJSV on February 14. The programs were arranged by Dr. John W. Dudley of the American Legion.

Dr. George C. Ruhland took part in a panel discussion on "Welfare and Health in Wartime Washington" at a luncheon meeting, February 25 of the Voteless D. C. League of Women Voters.

Dr. William DeKleine was appointed to serve on the Medical Advisory Committee to the D. C. Nutrition Service Committee, at the meeting of the Executive Board, December 22.

Dr. Oscar B. Hunter was elected to serve on the Board of Trustees of Group Hospitalization, Inc., at the business meeting of the Society, March 4.

Dr. H. C. Macatee was reëlected President of Health Security Administration on January 27, and **Dr. W. W. Eldridge** was elected First Vice President. **Dr. William DeKleine** will serve on the Executive Committee during 1942.

Drs. Daniel F. Lynch and Roy L. Sexton were speakers at a dinner meeting of the Health Committee of the Washington Business and Professional Women, February 23.

Dr. J. C. Wynkoop, who has served several times as President of the Washington Gun Club, was elected again to that office, February 17.

Drs. Ernest Spiegel and Norman P. Scala presented a paper on "Labyrinth and Cerebellum" before the Physiological Society of Philadelphia, November 18, 1941.

Dr. Bolivar J. Lloyd addressed the Democratic Women's National Council, February 16 at the Willard Hotel. His subject was "Health Suggestions during War Conditions."

Lt. Emil H. Bauersfeld was one of the officers graduated on February 28 by the Army Medical College from a course in tropical medicine. The course was started August 1, and up to the end of the year 108 officers had been graduated. Outstanding authorities in tropical medicine were consultants in the course.

Dr. Samuel Benjamin attended a course in Postgraduate Cardiology sponsored by the American College of Physicians at Boston, February 2–14.

CORRESPONDENCE

MINNEAPOLIS, MINN., February 13, 1942

EDITOR
MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA
WASHINGTON, D. C.

DEAR SIR:

I noticed in your Journal of January 1942 a review of my book entitled, "The Treatment of Infantile Paralysis in the Acute Stage," signed M.C.C. I am convinced that your reviewer did not review my book but accepted the statements made in the public press which are erroneous. For instance, your reviewer states:

> "This treatment consists of applying heat to spastic antagonistic muscle groups for relaxation; of early stimulation of the paralyzed muscle groups by massage;"

I consider it imperative that this statement should be immediately corrected as it is altogether wrong. Massage is not mentioned in the book and is altogether forbidden. I have proved beyond dispute that the muscles in spasm are the affected muscles, not the antagonistic as is stated by M.C.C.

My concept of the disease was presented by the Professors of Orthopedic Surgery and Physical Therapy of the University of Minnesota and appears in the opening chapter of the book, page 9, reading:

> "In addition she was thrown entirely upon her own resources and thus evolved an entirely original and unconventional concept of the disease.
>
> "According to this concept the cardinal symptoms of Infantile Paralysis are, to use her terms, muscle spasm, muscle inco-ordination, and mental alienation. This is opposed to the usual concept where the cardinal symptom is flaccid paralysis without muscle spasm or inco-ordination. The presence of spasm has been demonstrated in one hundred per cent of the acute cases observed in this study."

This statement was presented in December 1940. A further statement was presented to the National Foundation in December 1941 with the result that the medical committee of the Foundation endorsed the Kenny method and further stated that the findings of science had upheld this endorsement.

I would also draw the attention of your reviewer to the fact that my work has been honorary and all records are kept by the medical observers. My personal objective has been to improve the condition of the patient. These patients consisted of (in the first place thirty years ago) acute cases for which, as is stated in the official report, I was left to my own resources and gained my original concept, and later, cases that had failed to respond further to any orthodox treatment from three years to fifteen years from the onset did respond to a more or less degree to the Kenny treatment. I may also add that I never made any personal request to demonstrate my work but was invited to do so, both in Australia and the United States.

Your reviewer erroneously states:

> "This book is written in an antagonistic attitude toward the physician and physiotherapists who have spent years in attempting to alleviate as much as possible the crippling deformities that so often follow anterior poliomyelitis."

This statement is not correct as I am giving my method as a gift to both departments—a method that is acknowledged by all observers prevents the crippling that your reviewer admits occurs so frequently in the method they have been using. It is this method that allows these deformities to occur and destroy and humiliate the patient that I so utterly condemn, not those who conscientiously do their work.

Very truly yours,
SISTER ELIZABETH KENNY

FRANK LEECH, M.D., F.A.C.P.
(1870–1942)

A TRIBUTE TO A FRIEND

In the death of Dr. Frank Leech the Medical Society of the District of Columbia has lost a member who was replete with medical knowledge and seeped with the wisdom of experience.

Dr. Leech had an exceptional capacity for sustained friendship—a friendship constant, without variation or shadow of turning. To experience the richness of his companionship was a joy.

He met the issues of life unafraid, resolving its complexities into simple formulae. He wove the multicolored tapestry of life into the concrete realities of every day.

His enduring qualities were love and service. Never loosening his hold of the magnetic chain of humanity, he made barren places fruitful with kindness.

EDWARD Y. DAVIDSON

Dr. Frank Leech, long a prominent pediatrician, Life Member and former President of the Medical Society of the District of Columbia, died February 4, 1942 at Walter Reed General Hospital, following a long illness. Funeral services were held on February 10 with the Rev. Dr. Frederick Brown Harris of Foundry Methodist Church, and Dr. Leech's brother, the Rev. H. Bishop Leech of Paterson, New Jersey, officiating.

Dr. Leech was born in Prince Georges County, Maryland, on January 14, 1870, the son of the Rev. Dr. George Vanderlip Leech. He attended St. John's College at Annapolis and Ohio Wesleyan University. He received his medical degree from Columbian University, now George Washington, in 1891 and served his internship at Garfield Memorial Hospital, where he later became a member of the consulting staff. At Children's Hospital he served in various capacities from 1892 until his retirement in 1938. At that time Dr. Leech was honored by a tablet citing his distinguished services to the institution, and his friends established in his honor the Frank Leech Laboratory Fund.

Frank Leech, M.D., F.A.C.P.

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At the outbreak of the first World War, Dr. Leech volunteered and was commissioned a major in the Medical Corps. He was placed in charge of the medical departments at Camp Sevier and Fort Sill, Oklahoma. He was later commissioned a lieutenant colonel in the Medical Corps Reserve. He held memberships in the Reserve Officers Association, the Military Order of the World War, and the American Legion.

Dr. Leech was not only Past President of the Medical Society of the District of Columbia but of the Clinico-Pathological Society of Washington. He was a member of the American Medical Association, the American College of Physicians, the Southern Medical Association and the George Washington University Medical Society. He was one of the founders of the American Academy of Pediatrics.

Surviving are his wife and two daughters, Elizabeth Booraem and Frances Booraem Leech; a sister, Miss Elizabeth Beall Leech; a grandson, Philip Millar Leech, all of Washington, and his brother.

Dr. Leech was highly regarded by his colleagues and his passing will be mourned by all who knew him.

DORSEY M. McPHERSON, M.D.
(1857–1942)

Dr. Dorsey M. McPherson, an Active Member of the Medical Society of the District of Columbia, died March 2, 1942, at his home, 5816 Chevy Chase Parkway, following a long illness.

Dr. McPherson was born in Baltimore, Md., May 24, 1857. Completing his medical education at Columbian College in 1884, he joined the Army Medical Corps, and served two years in the field with the Indian Scouts and the Sixth Cavalry. After leaving the Army he came to Washington to serve as Medical Examiner of Pensions, and later as Medical Expert in the office of the Secretary of the Interior. In 1929 he entered private practice.

Dr. McPherson was a Fellow of the American Medical Association, a former Senior Vice Commander of the Order of Indian Wars, and a former member of the Association of Military Surgeons. He became an Active Member of the Medical Society of the District of Columbia in 1907.

Surviving are his wife, Mrs. Augusta Clark McPherson; two daughters, Mrs. Harry F. Lowe of Chevy Chase and Mrs. Verde McPherson Whiting of New York City; a stepson, George Walton Wenkenbach of Arlington, Va., three grandchildren and a great granddaughter.

JOE HAROLD ST. JOHN, M.D.
(1891–1942)

Lt. Col. Joe Harold St. John, Medical Corps, U. S. A., retired, died of coronary occlusion, February 17, 1942, at his home, 6811 Ninth Street, N. W. Dr. St. John had only recently become an Active Member of the Medical Society of the District of Columbia, his membership dating from January 26, 1942.

Dr. St. John was born at Paducah, Ky., June 5, 1891. He received his degree in medicine from Vanderbilt University in 1915, and his degree as Doctor of Public Health from Johns Hopkins University in 1935.

From 1917 to 1940 Dr. St. John was connected with the Medical Corps, United States Army, serving as Officer in Charge of Laboratories at various army posts until 1939. For nine years he was Instructor in Parasitology at the Army Medical School, and from 1928 to 1930, a member of the Medical Department Research Board, U. S. A. Since his retirement from active duty last year he had been associated with Dr. Matthew White Perry, specializing in parasitology.

Dr. St. John was a Fellow of the American Medical Association and of the American Association for the Advancement of Science. He also held membership in the Association of Military Surgeons, American Association of Parasitologists, American Association of Tropical Medicine, New York Biological Society, and the Washington Academy of Sciences.

Mrs. Helen St. John survives her husband, together with two daughters, Ann and Marie, and two sons, Harold and Richard.

HUGH McCORMICK SMITH, M.D.
(1865–1941)

Dr. Hugh McCormick Smith, Associate Curator of Zoölogy at Smithsonian Institution, died September 28, 1941, at his home, 1209 M Street, N. W., of coronary thrombosis and other complications. He had been an Associate Member of the Medical Society of the District of Columbia since 1914.

Dr. Smith was born November 21, 1865. He graduated from Georgetown University School of Medicine in 1888, and received the degree of Doctor of Laws from Dickinson in 1903. He was a member of the medical faculty of Georgetown University from 1888 to 1902, serving from 1895 as Professor of Normal Histology.

For a period of 36 years he was connected with the United States Fisheries. From 1901 to 1902 he was Director of the Marine Biological Laboratory at Woods Hole, Mass. After serving ten years as Deputy Commissioner, he became U. S. Commissioner of Fisheries in 1913 and held that office until 1922. He represented the United States Government at the First International Fishery Congress held in Paris, 1900, also at the Third Congress, in Vienna, 1905, and was Secretary General of the Fourth Congress, in Washington, D. C., 1908. From 1907 to 1910 he was Director of a Government expedition to investigate the development of fisheries in the Philippine Islands. In 1923 he was invited by the Royal Government of Siam to become Special Assistant to the Crown to study and develop the fisheries of that country. Three years later he was named Director of the Siamese Department of Fisheries. Since his return to Washington he had been engaged in research work on fresh-water fish of Siam and had almost completed an elaborate monograph on that subject.

Dr. Smith was a Fellow of the American Association for the Advancement of Science, and a member and past President of both the American Fisheries Society and the Biological Society of Washington. He also held membership in the American Ornithologists' Union, American Society of Naturalists, Washington Academy of Sciences, Cosmos Club, and honorary membership in other scientific societies. At the time of his death he was Vice President of the Association of Oldest Inhabitants of the District of Columbia. A number of medals had been conferred upon Dr. Smith in recognition of his outstanding work. He had written numerous articles and papers on ichthyology, a field in which he was internationally known.

Surviving are his wife, Mrs. Emma H. Smith, and two daughters, Mrs. Carl H. Claudy, Jr., of Washington, and Mrs. E. V. Cowdry of St. Louis, Mo.

(*Continued from page 94*)

Buerger's exercises over long periods of time without fatigue to the patient. These are of definite aid in obtaining the maximum blood flow through damaged arteries using the principle of gravity.

Let me say in closing, treat your patient with impaired arterial supply with an intelligent physiologic approach.

MEDICAL ANNALS
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FROM CIVILIAN PRACTICE TO MILITARY SERVICE*

DANIEL L. BORDEN, M.D., F.A.C.S.

Lieutenant Colonel, Medical Corps, United States Army; Professor of Clinical Surgery, George Washington University School of Medicine

THE readjustment from civil life to military practice is obviously a difficult problem for any doctor. Dropping an established private practice, adjusting family complications, stepping from civilian dress into a uniform, leaving behind the individual effort to become a cog in the wheel, yes, walking from one existence into a totally new field of endeavor calls for a mental state as determined as it must be flexible. All these changes, requiring no end of thought and detail work, disturb the mental equilibrium of most men. Especially was this true when the stimulation of actual war was not a motivating factor. It is satisfying to report, however, so far as my observation has gone, that once the hurdle is negotiated and the days of army life become routine, the mental disturbance resolves itself into a determination to see the job through to a finish to the best of one's ability.

The mechanical set-up that faces the average civilian doctor coming into the army may be divided into two classes: first, that of being ordered to field duty, and second, that of being ordered to hospital duty. It is quite evident that these two assignments vary materially. I will devote this paper to the military problems of the surgeon on hospital duty.

The surgical treatment and professional approach to the enlisted man in a military hospital does not differ materially from the care given private patients in a civilian hospital. The principles of surgery, established by our medical schools and stressed by postgraduate courses, constitute the fundamental background of surgical technic. In other words, the basic principles of surgery apply as well to military life as they do to civil practice. The average operative risk, however, in the physically well-developed soldier is far better than that seen in a general civil practice. On the other hand, war with its potential factors of hardship, exposure, trauma and disease subjects the soldier to great hazards.

Administrative details of a military organization involve a certain amount of paper work that becomes, in time, an accepted routine. This is necessarily essential. The military service depends upon its records for the protection of the soldier and government alike. Facetiously, it has often been said that the military record takes precedence over everything else. To the new officer, first assuming the responsibilities of his station, this paper work is a definite irritant, but there is no way to beat this indispensable part of army life, and the sooner accepted the better.

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* Read before the Society, February 11, 1942.

Another preliminary headache that soon becomes a habit is the assumption of responsibility for military property. For example, a ward surgeon, in charge of a ward, is given the responsibility for all the property in his ward. To this end he must sign vouchers that cover the property assigned to him. Before assuming this obligation and before signing these vouchers he must check the property concerned; and at varying intervals thereafter he should make a survey to be sure that none is lost. In the event of loss that cannot be accounted for, the officer is held financially responsible for its replacement. Controlling property in military life is always difficult for the civilian physician. He has never been accustomed to checking hospital property or accounting for it in his capacity as a civilian doctor.

To meet the present emergency, cantonment hospitals have been constructed throughout the country. In these recently developed hospitals the wards are large enough to accommodate 33 beds. In the average ward there are a few private rooms used for especially sick or isolated patients. Ventilation is excellent and there is ample space for all patients. The average ward is supplied with a ward surgeon and two or three female nurses who have the rank of second lieutenant. Rank of a commissioned officer gives the nurse authority over the corpsman who has the rank of private, corporal or sergeant. The wardmaster is usually a sergeant or corporal, and the average number of corpsmen assigned to a ward is three. The personnel for the care of the sick or injured is well organized and thoroughly efficient.

Soldiers admitted to the hospital are issued hospital pajamas and their uniforms are stored away. This is the only way we have of retaining them in the hospital. A hospital is not a prison, but, on the other hand, unless some restriction is imposed, it is difficult to retain large bodies of soldiers in a confined space. Also, it must be borne in mind that the soldier when discharged from the hospital goes direct to military duty. Therefore, in the military service the stage of convalescence is spent in the hospital. The army has no place for a sick man on active service; in other words, a soldier must be physically ready "to go" once he is returned to regular duty. Because of this, the length of hospitalization is prolonged as compared with civil practice. For example, a routine McBurney appendix is confined to the hospital for a period of 28 days, is then discharged to duty and is expected to be ready for field service. To build up physical stamina, appropriate supervised exercise and recreation are provided for the convalescent patient.

Convalescing soldiers confined to the hospital are allowed, by regulation, passes not to exceed 72 hours, but permission for these passes to be away from the hospital must be obtained from the ward surgeon. It behooves every patient in the hospital who expects permission to leave the reservation on a pass to maintain his own deportment in such a manner that this recognition will be granted him. The hospital has no other means of disciplining patients, and if a man oversteps or remains AWOL (absent without leave), it is his company commander who is responsible for his discipline. When he returns to his regular duty he will receive from the company commander the sentence appropriate to his misdeed.

The disposition of surgical cases presents problems to the military surgeon that can best be understood by a discussion of some of the more common complications that must be solved before actual surgical interference is considered. In general, it is not the policy of the United States Army to operate upon conditions incurred before the soldier enters the service unless a reasonable degree of success is assured. In other words, the Army does not propose to assume responsibility for correcting preëxisting pathologic conditions unless it is reasonably sure of a successful outcome within an acceptable period of time. Patients with conditions that do not warrant correction because they involve too much risk for complete cure fall in a class that should be discharged from the service as a result of physical disability incurred before induction, commonly referred to as EPTI (existed prior to induction). Soldiers discharged for physical disability are given a certificate of disability for discharge, known as C.D.D. In order to make this clear I will give the following example.

A young man recently inducted into the United States Army complained of pain in the thigh and gave a history of having had a fracture some 4 years before. As a civilian he had had no difficulty with his leg. X-ray examination showed the old fracture to be well healed but a Lane plate was still fixed to the femur, with bony necrosis around the screws. It became apparent at once that the removal of the Lane plate was an easy technical procedure. Its removal, however, would not insure against the possibility of continued pain or progressive necrosis of the bone. The military surgeon, having assumed the responsibility of removing the plate, must accept the burden of continuing this man in the military service with a preëxisting disability that is self-evident.

Reviewing this case, it is clear that this man has been inducted into military service with a Lane plate in situ. During civilian life he has had no complaint, but military existence has put a burden on him both mentally and physically. His disability is demonstrated conclusively by X-ray films. His mental attitude is antagonistic to military service, a serious handicap to surgery. In other words, he is a poor military risk. Once operated upon in the military service he has a definite claim on the government. Therefore, it becomes logical that the smart thing to do is to evade this questionable outlook and return this man to his civilian status.

The physical and mental background of every individual is evaluated. Spirit with a good physique will often swing the balance of judgment in favor of corrective surgery. So, again, judgment of the man as well as his physical disability is a duty that rests largely with the military surgeon. A fine degree of judicial common sense is essential to good military administration.

Borderline cases continually harass the military surgeon. The experience gained from our last World War cannot be ignored and every effort is exerted to protect the government from the pension hazard of the physically and mentally unfit.

It is quite impossible to enumerate the many surgical problems that are seen daily in a military hospital. I shall confine my remarks to some of the more common conditions met on ward rounds.

The question of flat feet has always been an enigma to the military surgeon. Soldiers inducted into the United States Army, accustomed to a sedentary life, are suddenly thrown into active marching duty. More than this, they have to carry full equipment and "pack" a gun, a total added weight of some 50 pounds, approximately one third the average body weight. It is quite apparent that some soldiers who have a slight degree of flat feet in civilian life suddenly find themselves with painful arches. Although this is true, it is also evident that there are other soldiers who are inclined to overestimate the flatfoot problem, and the surgeon is faced with the difficulty of distinguishing between these two classes.

True flat feet will usually yield to corrective exercises, rest, and the fitting of proper shoes with selective mechanical support, if necessary. Prescribed exercises are given to men complaining of foot strain. These exercises are carried out under the direct supervision of the field medical officer.

During the prewar training period the flatfoot problem became so serious that it was necessary to issue special instruction covering it. For your information I include an extract from this regulation.

"The frequency with which discharge for flatfoot is requested of this Headquarters leads to the belief that, in some cases at least, discharge is not warranted.

"Since pain and discomfort from flatfoot is a commonly accepted popular belief, it is not unreasonable to assume that in certain cases dissatisfied inductees resort to complaints of painful feet which are not justified.

"In no case will a request for disability discharge for this condition be submitted until a reasonable and fair trial has been made to readjust the soldier, and at all stations where the services of a competent orthopedist can be had, a careful study from a professional standpoint will be made before requests for discharge. When submitted, the latter will be accompanied by a detailed report of the measures taken."

Another perplexing problem facing the military surgeon is the ever-present varicocele. Regarding this difficulty, it is well known that advanced varicocele will disqualify a candidate for service in the army or navy. Uncomplicated varicocele will respond to the wearing of a suspensory. This being true, one can tackle the problem by a partial scrotectomy which, essentially, is a shortening of the scrotum so as to make a proper suspension or support for the testicle without invading the spermatic cord. Ligation of the spermatic veins does away with the venous congestion. In spite of this correction, many soldiers will complain of continuing pain, and there is no method by which we can rule this out. Partial scrotectomy does away with involvement of the spermatic cord and in true varicocele it will serve the purpose.

Pilonidal cysts, in my experience, account for a large percentage of disability occurring among recent draftees. Increased marching with excessive perspiration seems to aggravate a formerly quiescent lesion. These pilonidal cysts, all acquired before admission to the service, are usually treated by surgical eradication, provided the cyst is not too extensive. If a reasonable degree of success with eradication seems probable, the pilonidal cyst is excised. A long convalescence period is inevitable, usually at least three months.

The painful back, free of all objective signs, faces the military surgeon like the proverbial bugbear. X-ray examination with competent orthopedic advice remains the only solution of this difficult problem. More and more we are having to rely upon the medical findings in these cases after the usual rest, support and restorative physiotherapy measures have been taken. Since the outbreak of war this difficulty has had a material drop as compared with the prewar training period of the citizen army.

Roentgenography is being used on a large scale for all suspected lesions involving all parts of the anatomy. This extravagant recourse to X-ray visualization seems, at first, out of all proportion to the actual need of the patient. However, it serves the real purpose of protecting the government from future claims that have been so prevalent following our last war. A negative X-ray report, therefore, may be of inestimable value to the government. At the Station Hospital at Fort Meade we have an average of 60 to 100 X-ray cases daily.

Paralleling civilian emergency surgery, the automobile and motorized vehicle, in my experience, is responsible for the greater number of hospital surgical admissions as well as for most of our more serious traumatic lesions. Recognition of this evident hazard may have led to the elimination of the use of the privately owned car during the recent summer maneuvers where officers and soldiers were restricted to the use of military equipment. It is my feeling that the enforced shortage of rubber may automatically solve a perplexing and serious problem now facing our armed forces in this country.

In all cases of serious injury, as a protection to the soldier and government alike, a line of duty board determines if the disability is incurred in the discharge of duty. This administrative procedure is essential in all cases involving possible permanent disability of any kind. Although it is the duty of every officer to protect the government in every way possible, it is at the same time his duty to do full justice to the patient. As a matter of fact, the patient, in keeping with tradition, always comes first. And we go a step further; whenever possible it has been our custom to reach the nearest relative in the event of serious complications, in other words, to humanize our approach to the patient and to his kin. The Red Cross has come to our help in this respect. At the Fort Meade Station Hospital the Red Cross provides rooms, without cost, for the convenience of parents visiting seriously ill soldiers. The Commanding Officer and the Chiefs of the Services see these parents personally and go over with them the problem at hand to allay their disturbed minds and, at the same time, instill confidence. It has been my experience that a complete understanding between patient, parent and physician engenders coöperation, sympathy and courage that work for the good of all concerned.

With a sense of confidence I can report that the soldier in the Army is getting the best possible medical attention. Upon his admission into the service he is given, by regulation, a morality lecture by a captain, a medical officer, and a chaplain, followed by a sound motion picture film based upon a factual medical approach to the venereal problem. His attendance at this lecture is made a part of his military record. From the onset, he knows that venereal disease exacts its punishment and that he loses his pay during the period of his illness, and he learns that he must make up all time lost from duty as a result of venereal infection. He receives typhoid prophylaxis and tetanus antitoxoid, and his blood is grouped. If ordered to tropical service he is given yellow fever antitoxin. He is further equipped with two identification tags giving his name, serial number, address, religion, blood group, and prophylactic symbols. By regulation these tags are worn at all times around the neck.

A prophylactic and corrective dental survey is made as a routine procedure. It is interesting and perhaps distressing to note that during the past summer, in three months' time, over 10,000 teeth beyond repair had to be extracted at Fort Meade. This perhaps gives us an index as to the care given the teeth by the youth of our time.

In the event of illness or injury every medical facility is available to the soldier. As never before in the history of this country, the soldier is getting the best that the science of medicine can offer. Blood plasma is always available, oxygen tents, emergency operative facilities, trained personnel—everything that is essential in the interest of the patient.

To anyone who served in the last war it is apparent that there has been a decided change for the better in the preparation for the care of the sick and wounded in this war. From a surgical point of view we are equipped with young, thoroughly trained surgeons who lack nothing except the stabilizing influence of age and experience. We are getting young men who have had special surgical training in our various clinics throughout the country, men who are or have been trained to comply with the qualifications demanded by the American College of Surgeons and the American Board of Surgery. This has given us a high degree of individual surgical efficiency never before seen in a vast military effort in this country.

The policy of the Surgeon General and his Corps Commanders to make known the problems and progress of the Medical Department has been a move in the right direction. The Surgeon General, in person, has addressed all medical officers in this immediate locality (at the Army Medical Center) and has taken them into his confidence. He has gone a step further and sent out representatives from his office to reach the various medical groups throughout the country in order to enlist their coöperation and active participation. To the National Research Bureau he has referred perplexing medical problems that a common understanding for the good of all the service might be reached. Yes, there has been a spirit of coöperation worthy of commendation.

Within recent months there has been established a Committee of Procurement and Assignment to classify and evaluate the status of all physicians in the United States. If one will analyze recent official statements of the President of the United States, it becomes apparent at once that the demand for doctors in the military service is going to be very great. It will keep pace with the national program, so that we must, and will, be prepared for service and the sacrifice that is inevitable.

The Station Hospital at Fort George G. Meade, Md., exemplifies the type of cantonment construction that the Army has established to house its sick and wounded. Unless actually seen the average civilian physician has no conception of the vastness of this effort. This hospital covers 48 acres of land and is composed of over 78 separate buildings. There is, at present, accommodation for 1,000 patients with a potential bed capacity of 1,500. To serve such a large number of disabled soldiers there exist, as a part of the hospital, wards (medical, surgical, psychiatric, genitourinary, nose and throat), administrative buildings, barracks for officers, nurses and enlisted men, storehouses, kitchens, a chapel, utilities building, and a medical library, as well as a fully equipped fire department. Two miles of communicating hallways connect the various buildings.

To stimulate professional attainment and to meet the requirements of the American Board of Surgery, a teaching program has been instituted at the Station Hospital at Fort Meade. This includes daily ward rounds, daily X-ray conferences, and weekly clinics at which outstanding surgeons are invited to address the attending group. Motion pictures are obtained weekly from the Mayo, Lahey and other Clinics for practical demonstrations. Officers granted detached service to attend scientific sessions are expected to summarize and report at the staff conference a complete resumé of all new or pertinent information gained at such meetings. The Medical Department of the Army has been extremely liberal and has shown great foresight in granting opportunities for professional advancement, encouraging officers to participate in group scientific sessions. It is to the advantage of the personnel of the military hospital that knowledge gained from these meetings be disseminated by those fortunate enough to receive it firsthand. All officers are impressed with the responsibility of returning to their unit with well prepared notes covering every phase of scientific information gleaned during the period of detached service. The officer personnel of all the Field Units stationed at Fort Meade is invited to all scientific sessions held at the Station Hospital.

The teaching program now in force has been made possible by the coöperation of the Commanding Officer of the Station Hospital at Fort Meade. I want to take this opportunity to publicly acknowledge the gratitude and appreciation of the entire staff of our hospital to its Commander, Col. Daniel P. Card. Colonel Card with his Executive Officer, Major Hugh L. Prather, both regular army officers, suddenly found themselves in charge of a large group of reserve officers. Their understanding attitude has built up an esprit de corps that speaks for itself. In all my military experience I have never encountered a better or finer spirit of coöperation and confidence.

It is a great tribute to the foresight of the Medical Corps of the United States Army that its regular personnel has, by mutual understanding, been able to absorb its Reserve Corps into a combined organization of efficiency, coördination, and loyalty that is destined to fulfill the supreme purpose of rapid rehabilitation of the sick and wounded. I look forward with confidence to the future. When the record is read, the Medical Corps of our Emergency Army will not have failed.

DISEASES OF THE PANCREAS*

I. The Acute Diseases

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A CONFUSION of terms has been responsible in large part for our poor understanding of acute lesions of the pancreas. Acute hemorrhagic pancreatitis, acute suppurative pancreatitis, acute gangrenous pancreatitis, and acute pancreatic apoplexy are but a few, and all refer to various phases of the same pathologic process. Pancreatitis is, in itself, a misnomer, inasmuch as necrosis, and not inflammation, is the primary pathologic change. As suggested by Elman,[1] acute pancreatic lesions may be readily divided into: (a) acute pancreatic necrosis, a shocking and lethal disease, and (b) acute pancreatic edema, a self-limited condition, attended by a low mortality.

ACUTE PANCREATIC NECROSIS

A recent reawakening of interest in this dreaded abdominal catastrophe has not been without results. Fruitful clinical and experimental investigations have added considerably to our knowledge of this condition, and as a result its treatment has been materially improved.

Etiology and Pathogenesis—Opie's[2] demonstration of the lodgment of a gall stone at the ampulla of Vater offered the first plausible theory of the etiology of the condition. However, the relative infrequence of gall stones in acute pancreatic necrosis,[3] and the demonstration by Mann and Giordano[4] that an anatomic possibility of the retrojection of bile into the pancreas as the result of an impacted stone rarely existed, indicated that this hypothesis was tenable in only a small percentage of cases. Archibald[5] was able to create necrosis of the pancreas in cats by causing a spasm of the sphincter of Oddi, after which he elevated the pressure within the gall bladder. He suggested that as a result of duodenal hyperacidity or biliary tract disease a similar spasm of the sphincter occurs clinically, with consequent retrojection of bile into the pancreas, and finally necrosis of the gland. An imposing array of evidence against this view has resulted from more recent investigations. Intrapancreatic pressure has been shown to exceed intrabiliary pressure both experimentally and clinically.[6,7] Most convincing was the meticulous work of Boyden,[8] who found that the main part of the sphincter of Oddi is actually a sphincter choledochus, situated several centimeters above the ampulla, spasm of which very effectively prevents the escape of bile from the biliary tree. Of current interest in the pathogenesis of this disease is the work of Rich and Duff.[9] While studying the histologic changes in the pancreas in acute necrosis, they observed a striking metaplasia of the epithelium of the smaller ducts, proximal to which the ductules and acini were dilated. They claim that sufficient obstruction is produced by these cellular masses to cause rupture of the proximal ductules with escape of the pancreatic juice into the parenchyma of the gland. The significance of these findings is questionable, since Yotuyanagi[10] has reported the frequent occurrence of a similar metaplasia in normal pancreatic tissue.

Irrespective of the aforementioned theories, the factor of final importance in the pathogenesis of this disease is the intraglandular conversion of the trypsinogen of the pancreatic juice to trypsin, a process that physiologically takes place in the duodenum as the result of the action of enterokinase. How may this preënzyme be activated within the pancreas itself? Bacteria probably play the most important role in this abnormal conversion. Dragstedt[11] and his co-workers have repeatedly cultured an anaerobic bacillus from normal pancreas, and they believe that stagnation of the pancreatic juice favors the growth of these organisms. Furthermore, it has been demonstrated that trypsinogen becomes activated merely as a result of long standing,[11] a significant fact in the event of duct obstruction, and that pancreatic juice obtained by vagal stimulation contains active trypsin.[12]

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* Abridgment of Part I of the Davidson Lecture, delivered before the Society, October 8, 1941. Part II will appear in an early issue of the ANNALS.

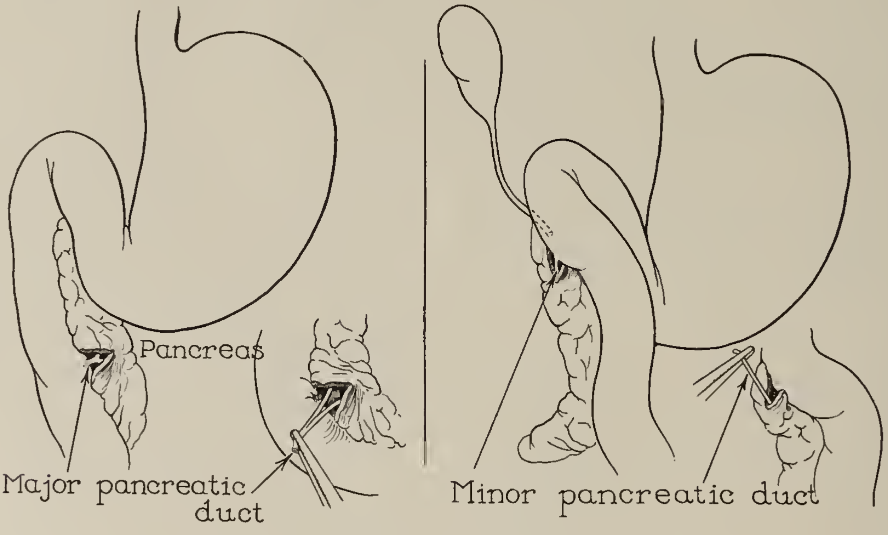

FIG. 1. Evulsion of major and minor pancreatic ducts.

In an attempt to evaluate the role of certain factors in the causation of acute necrosis of the pancreas, I conducted various experiments on dogs. These surgical procedures were carried out under nembutal anesthesia with rigid surgical asepsis.

Series 1.—In 12 animals, the major and minor pancreatic ducts were isolated and evulsed by gentle stripping from the parenchyma of the gland (fig. 1). The pancreas immediately assumed a hemorrhagic appearance. Only 1 animal expired, and autopsy revealed the presence of a typical acute pancreatic necrosis. It would appear from these experiments that trauma and hemorrhage into the gland are not factors of prime importance.

Series 2.—In 8 experiments the minor pancreatic duct was evulsed, and the major duct was doubly ligated and divided. Bile, secured by aspiration from the gall bladder, was injected into the ligated major duct in amounts of 1 or 2 c.c. (fig. 2). In 2 of the animals the bile was injected directly into the pancreas. None of the dogs exhibited any evidence of acute necrosis. It is evident from these studies that sterile canine bile is quite innocuous.

Series 3.—Four dogs were similarly prepared by evulsion of the minor duct and ligation-division of the major duct. Upon recovery each animal received 250 c.c. of 5 per cent alcohol intravenously (fig. 3-a), and on the following day a similar injection was given. The dogs manifested no ill effects other than transient alcoholic intoxication. It has been claimed that alcohol is an important etiologic agent in this disease.[13]

Series 4.—Following minor duct evulsion and ligation-division of the major duct, 1 gram of the canine bile salt, sodium taurocholate, was injected intravenously in 2 experiments (fig. 3-b). Neither this injection nor a similar one on the following day caused any ill effects. These studies were designed to determine whether an increased concentration of bile salts in the blood was capable of activating the trypsinogen within the pancreas in the presence of an obstruction of the pancreatic ducts. Such a mechanism could conceivably occur in the presence of an impacted stone at the ampulla.

Series 5.—In 4 experiments the major duct was isolated and opened. A piece of no. 2 chromic catgut was so placed in the duct that one end extruded into the duodenum and the other extended proximally in the duct for several centimeters. The opening in the duct was then closed. The animals promptly recovered and showed no evidence of pancreatic injury. This experimental procedure was designed to permit ascending infection and reflux from the duodenum into the pancreatic duct.

Series 6.—After preparation of 6 animals by minor duct evulsion and ligation-division of the major duct, a pharmacologic dose of pilocarpine hydrochloride was injected intravenously (fig. 3-c). Four animals expired in less than 10 hours, and on postmortem examination a hemorrhagic, necrotic pancreas was found in all. The 2 surviving animals appeared very sick, and after a similar injection of pilocarpine on the following day they were sacrificed. Identical postmortem findings were encountered. Four animals in whom the pancreatic ducts had been evulsed were given the same dosage of pilocarpine on successive days without showing any evidence of pancreatic necrosis. Pilocarpine, being a parasympathetic stimulant, promotes the physiologic activity of the pancreas, and it is to be concluded from these studies that this factor, in the presence of obstruction of the pancreatic ducts, plays an important role in the etiology of pancreatic necrosis. However, this factor operates only in the presence of an intact ductal system.

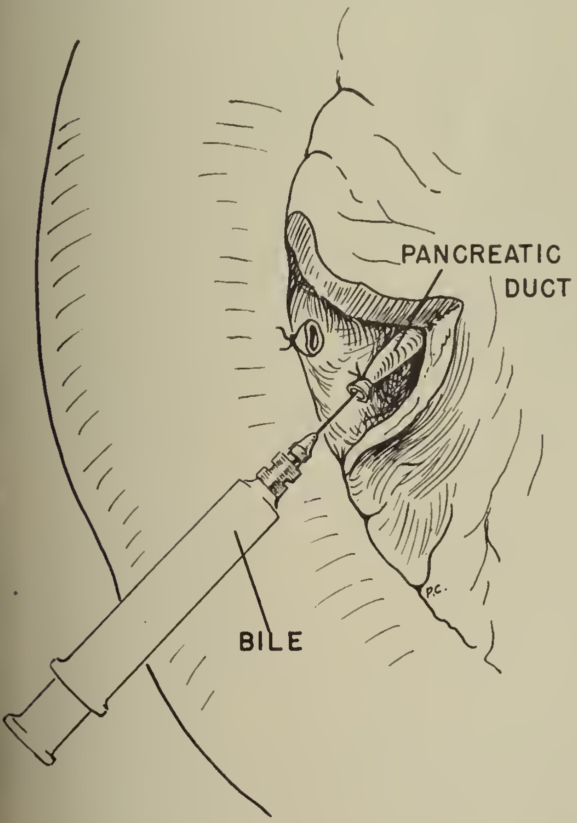

FIG. 2. Injection of bile into major pancreatic duct.

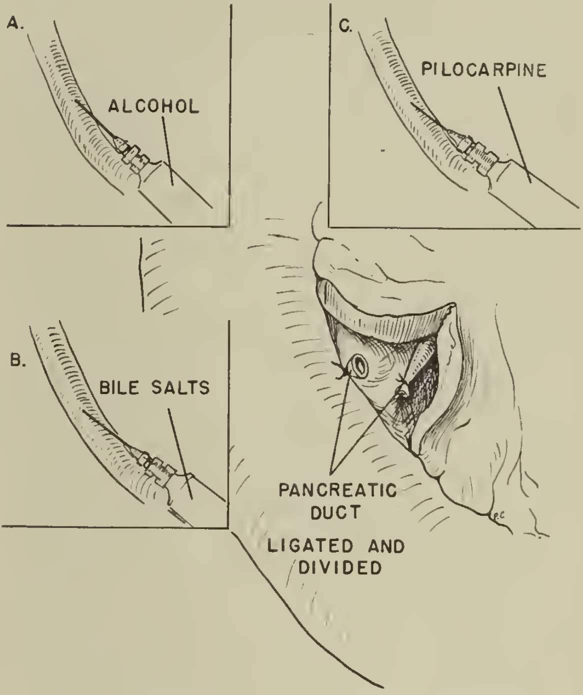

FIG. 3. Ligation and division of major pancreatic duct followed by intravenous injections.

No single factor or single combination of factors can explain the etiology of all cases of acute pancreatic necrosis. Stagnation of pancreatic juice, bacterial growth, and physiologic activity of the pancreas are probably most often responsible for the all-important activation of the trypsinogen. Lymphogenous spread of infection from the gall bladder, as suggested by Deaver,[14] lacks experimental support, while the hematogenous type of acute necrosis, which has been observed as a complication of mumps, diphtheria, typhoid and influenza, is uncommon. Of rare occurrence are those cases in which Ascaris lumbricoides becomes lodged in the terminal end of the major pancreatic duct,[15] those resulting from perforation of a duodenal ulcer,[16] and those following severe abdominal trauma.[17]

Pathology.—The pancreas appears hemorrhagic, swollen and necrotic. The hemorrhage has been shown to result from the necrotizing influence of the trypsin on the blood vessel walls.[9] Bloodstained peritoneal fluid is encountered in variable amounts. Fat necrosis, formerly considered to be of such diagnostic importance, may or may not be present, depending on the lipolytic activity of the pancreatic juice, and its presence in no way influences the severity of the disease. Upon recovery from the initial attack, suppuration of the pancreas and abscess formation not infrequently occur, often eventuating in a large abscess or pseudocyst of the lesser omental sac.

Symptoms and Diagnosis.—Little can be added to Upcott's[18] classic description of the symptoms of this abdominal calamity, "a sudden agonizing pain in the upper abdomen, radiating through to the back, usually occurring after a full meal in a stout person of middle age; a rapid, thready pulse and extreme collapse; early, incessant vomiting; cyanosis of the face and extremities, and sometimes of the abdominal wall; constipation and distention of the transverse colon, but not complete obstruction; persistent local tenderness in the epigastrium, contrasted with the absence of abdominal rigidity in the early stages; and, later, the development of a swelling above the umbilicus; all these make an unmistakable picture." The pain is usually intense, and according to Moynihan,[19] "of all the pains the human body can suffer, this is the worst." Most often it is located in the epigastrium but may extend to either hypochondrium or through to the back. A doughy resistance may be palpated in the epigastrium but never extreme rigidity. The victim often appears shocked, but as Cole[20] has pointed out, real shock as exhibited by a thready, rapid pulse and arterial hypotension seldom occurs. Jaundice develops in about one third of the cases, and it usually consists of a mild icteric tinge of the sclerae. The temperature may be subnormal or slightly elevated. A peculiar blotchy cyanosis about the umbilicus, known as Cullen's sign, may be a valuable diagnostic finding.[21]

In the majority of cases a moderate elevation of the blood sugar takes place early in the attack, while glycosuria occurs in only about 10 per cent of instances.[22] Diabetes mellitus is a relatively rare complication after recovery from this condition. A lowered glucose tolerance can be demonstrated very often.

Our one worthwhile and dependable diagnostic aid is the serum amylase determination. Of sufficient simplicity to be carried out in the average well-equipped laboratory, this test requires less than an hour. Clinical and experimental studies[17,23,24] have demonstrated that acute pancreatic damage results in a prompt rise of the serum amylase, the peak being reached within 48 hours with a complete or partial subsidence 48 to 72 hours later. Consequently it is important in the diagnosis to determine the amylase level of the blood early in the course of the disease. Although Papen[25] asserts that an abnormal elevation of serum amylase occurs in biliary tract disease and in perforated peptic ulcer, there is almost complete agreement among experienced workers in this field that in all but pancreatic disease the serum amylase remains within normal limits. The serum lipase level is elevated in about one half of the cases,[26] but its use as a diagnostic aid in acute pancreatic necrosis is limited, since 24 to 48 hours is required for its completion.

Formerly the diagnosis of acute pancreatic necrosis was made almost exclusively at the time of operation or at postmortem examination. However, a clinical diagnosis is much less difficult if the fact that each patient has a pancreas is borne in mind. There are no pathognomonic signs or symptoms of this condition, but since a clinical suspicion may be so readily confirmed by the determination of the serum amylase level, an accurate diagnosis is possible in a large percentage of cases.[27,28] Very often the keenest diagnostic acumen is required to exclude such mimicking conditions as acute cholecystitis, perforated peptic ulcer, high intestinal obstruction, mesenteric thrombosis, acute coronary thrombosis, and acute pericarditis. In Lewison's[17] experience, the commonest diagnostic errors were acute gall bladder disease, perforated peptic ulcer, and acute appendicitis.

Treatment.—In recent years the pendulum has taken a decided swing toward the conservative handling of acute necrosis of the pancreas. As long as this condition was regarded as undiagnosable, there was an irrefutable argument for immediate surgical exploration, for otherwise a perforated ulcer or ruptured gall bladder might be overlooked. However, the need for hurried surgical intervention becomes less and less as our diagnostic accuracy improves. Direct surgical attack upon the pancreas by multiple incisions of its capsule, drainage of the lesser sac, and other equally illogical procedures are being discarded. Drainage of the peritoneal cavity accomplishes little, since it has been shown that the bloody peritoneal fluid of dogs that died of acute pancreatic necrosis was innocuous when injected into other animals.[20] In the light of our present knowledge of the pathogenesis of this condition, drainage of the biliary tract by cholecystostomy or choledochostomy only contributes to the shock and prostration of the patient. A resumé of the experiences of eight outstanding surgeons who have adopted the conservative management of these cases reveals a lowering of their mortality from 60 per cent with immediate operation to 22 per cent when surgery was eliminated or deferred. Of course, many cases will continue to be subjected to surgery under an erroneous diagnosis. Nordmann[29] reported 4 such instances in all of which he closed the abdomen without drainage and, significantly, without mortality.

The conservative régime recommended by Wangensteen[30] consists in instituting measures directed toward interrupting the pathologic conversion of trypsinogen to trypsin. This is best accomplished by depressing the physiologic activity of the pancreas. All food by mouth is withheld. On the strength of Babkin's[31] demonstration that hyperglycemia stimulates the secretion of pancreatic juice, the injudicious use of intravenous glucose is to be avoided. If it is necessary to give glucose in large amounts, the administration of insulin is strongly recommended. Generous use of the barbiturates is advised on the basis of the experimental demonstration by my associates and me[32] of the depressing effect of sodium barbital on the flow of pancreatic juice in the dog (fig. 4). Ephedrine has a similar action, and in addition, dramatic relief of pain has been reported with its use.[33]

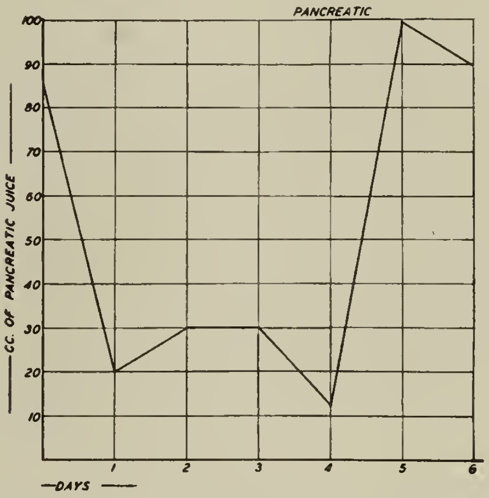

FIG. 4. Effect of intravenous injection of 100 milligrams of sodium barbital on secretion from a pancreatic fistula in a dog.

The majority of surgeons are in accord that deferred drainage of a pancreatic abscess and elective correction of obvious biliary tract disease should be carried out. According to Elman and Sachar,[34] if the symptoms are not subsiding after a week, drainage of the lesser sac is indicated. They are of the opinion that it is impossible for an infected necrotic pancreas to heal spontaneously.

ACUTE PANCREATIC EDEMA

With improvement in the tests of pancreatic function, it became evident that certain cases of moderately severe epigastric pain, often associated with mild icterus and unaccompanied by shock, were due to acute disease of the pancreas. Elman[1] originally identified such a syndrome and at operation he observed a nonhemorrhagic edema of the pancreas as well as areas of fat necrosis in the tissues adjacent to this organ. Furthermore, he pointed out the value of the serum amylase determination in the diagnosis of this condition. The serum amylase level, though not as high as in acute necrosis, is consistently elevated. Zoeppfel[35] noted similar edema of the pancreas in association with acute inflammation of the gall bladder, and he emphasizes its distinction from acute necrosis by the absence of shock and the low mortality. Innumerable writers have called attention to this same syndrome.[30, 36, 37]

I have frequently observed an identical appearance of the pancreas in dogs that had been sacrificed soon after an unsuccessful attempt to produce a lethal pancreatic necrosis by some of the previously described methods. Similar observations have been made by others in experimental animals in whom a striking rise of the serum amylase was found.[38]

Unquestionably the ultimate distinction between acute edema and acute necrosis of the pancreas rests in the absence of intraglandular activation of trypsinogen in the former. Whether this syndrome is a distinct clinical entity or, as Abell[39] suggests, an early phase of acute necrosis, is unsettled. The preponderance of evidence favors the former view, although edema of the pancreas has been identified at operation in patients who died subsequently of acute necrosis. It is possible, however, that the trauma incident to operative manipulation may have precipitated the necrosis. The clinical recognition of acute edema depends largely on the demonstration of an elevated serum amylase level in cases of atypical upper abdominal pain.

The treatment is conservative and symptomatic. Because of its relaxing influence on the sphincter of Oddi, Casberg[37] recommends the use of amyl nitrite for the relief of pain. Morton and Widger,[24] noting the similarity between acute pancreatic edema and acute parotitis, have used deep X-ray therapy in these cases with encouraging results. Obvious gall bladder disease should be corrected in an interval operation.

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HISTAMINE IN THE TREATMENT OF RAYNAUD'S DISEASE AND ACROCYANOSIS

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THE recognition and treatment of peripheral vascular disease has been increasing in importance for the past several years. Very little progress, however, has been made in the treatment of such vasospastic conditions as Raynaud's disease and acrocyanosis. Recently, Mulinos, Shulman and Mufson[1] have described a new treatment for Raynaud's disease using two drugs, histamine hydrochloride and papaverine hydrochloride, with good results. Because the histamine iontophoresis was only briefly mentioned in the previous publication and because of its significance in the determination of the type of blood vessel involved in the vasospastic conditions mentioned, a more detailed description of this drug was thought appropriate. The use of histamine by iontophoresis is not new, as is seen from a review of the literature.

Histamine by iontophoresis was first introduced by Deutsch[2] in 1931, and reports of its use have since been published by Kaufmann,[3] Bettmann,[4] Schenck[5] and Govaerts.[6] Favorable results have been reported by Mackenna,[7] Kling,[8] Kling and Sashin,[9] Young,[10] Faber,[11] Bisset,[12] and Bisset and Woodmansey[13] from the use of histamine by iontophoresis in the treatment of arthritis and peripheral circulatory disturbances. The last authors explain the rationale of the use of histamine on the basis of a systematic examination of the capillaries of rheumatic patients which showed a spastic and attenuated condition of the capillaries. This condition they determined was due to a lack of the normal vasodilator substance discussed by Lewis[14] as histamine or the "H" substance. They carried out experiments and determined that the histamine response shown in cases of individuals with various types of rheumatism was less marked, delayed, or inhibited. The authors, therefore, attempted to substitute by artificial means the deficiency in the form of medication with a histamine preparation. Bettmann[4] studied capillary changes and found a marked increase in the rate of circulation, in the number of capillaries visualized and dilatation of the subpapillary vessels following the use of histamine.

The treatment employed by me was limited to the upper extremity, the study being done on 10 cases of Raynaud's disease and 2 cases of acrocyanosis. These patients were taken from the peripheral vascular clinic of the Presbyterian Hospital of New York City. Because of the many other types of vascular disease, the Massachusetts General Hospital had drawn up a definition of this clinical entity which was rigidly adhered to in the selection of the patients. A few salient features of the disease may be mentioned. Raynaud's disease usually appears between puberty and the menopause and is ten times more frequent in women than in men. The disease manifests itself with varying degrees of severity and may be divided into three types, the mild, moderate and severe. The mild type as a rule is not seen by the physician or remains unrecognized. The complaint among this group is that of coldness of the extremities with occasional rare attacks of a syncopal or asphyxial nature. The moderate type presents the typical, frequently occurring asphyxial and syncopal attacks usually involving both hands symmetrically and induced by the various stimuli such as exposure to cold, fright, anger or excitement. The severe type shows trophic changes in addition to the usual symptoms. Acrocyanosis occurs mainly in young women and involves both the upper and lower extremities. They are usually cold and clammy and present a reddish purplish mottled appearance. White[15] considers acrocyanosis as a form of Raynaud's disease because it is relieved by cutting the vasoconstrictor pathways.

METHOD OF OBSERVATIONS

The plethysmograph method of Hewlett and Van Zwaluwenberg[16] was used to measure the rate of blood flow and hand capacity volume. The hand is placed in a plethysmograph and a 70 mm. Hg pressure is applied to the forearm by means of a 5 cm. cuff. The method is discontinuous, a minimum of 2 minutes being allowed to elapse between readings. The tracings consist of two main parts, the initial slope which indicates the rate of inflow and is computed in c.c. per minute per 100 c.c. of hand volume, and the secondary less steep slope which gradually becomes almost horizontal within 1 minute of the application of the pressure. The height thus obtained is designated as "capacity volume," and depends upon the tonus of the vessels and the number of patent minute vessels. Capillary observations before and after treatment were made with a Leitz Ultropack.

TECHNIC OF HISTAMINE IONTOPHORESIS

Histamine hydrochloride, 1 per cent, available in ointment form as Imadyl Unction* is vigorously massaged into the skin of the hand and forearm of both upper extremities. A hot wet towel is wrapped around the hand to the wrist, and a zinc-lead plate is wrapped over the towel from the fingers to the wrist, care being taken not to touch the skin with the metal. Another towel is wound around the upper forearm and a zinc-lead plate placed over it. To each of the plates is attached an electrode, a positive and a negative. The current is turned on and gradually increased until anywhere from 20 to 60 ma. at 110 volts is reached depending upon how much the patient can tolerate. The more severe the case the greater the number of ma. tolerated, the average being 30 to 40. The length of time of treatment is gradually increased from an initial 2 minutes to 9 minutes in some instances, the average time being 5 minutes. At the end of the set time the polarity is reversed so that the histamine which at first is driven into the tissues of the forearm is now driven into the tissues of the hand. The polarity is so managed that the treatment is always concluded with the positive pole at the hand. No diminution or loss of reaction due to change of polarity is noted in the area which had the histamine first. In other words, the negative pole does not remove the histamine from the tissues to any great extent once it has been discharged into them. Each arm is treated individually, and the entire treatment consumes an average of 20 minutes. When the polarity is to be reversed or the treatment concluded, the current is cut off gradually. I have recently modified somewhat the technic just described. The plates and electrodes are applied to both hands simultaneously as described above, one electrode being positive, the other negative. At the end of the set time of iontophoresis, instead of reversing the polarity, the plate and positive electrode of the hand just iontophoresed is removed and placed on the forearm of the other extremity. The electrodes are reversed so that the electrode at the hand is positive and the one at the forearm negative. This avoids any possibility of the removal of histamine from the tissues and no histamine is iontophoresed into the tissues of the forearm.

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* Imadyl Unction consists of histamine dihydrochloride, 'Roche' 1%; acetylglycol-salicylic-ester, 'Roche' 5%, and thymol, in an emulsified, absorbable emollient base.

Local and Systemic Effects from Histamine Iontophoresis

During the treatment there is no sensation in the arm other than that of the current. When the treatment is completed and the wrappings removed, the patients allow the hands to hang at the sides for 3 to 7 minutes, the length of time it takes for the maximum amount of whealing to appear. The patient at this time has a pleasant sensation of extreme warmth in the arms. The latter are very much reddened and the urticaria is marked, especially on the forearm, about the wrist, and on the dorsum of the hand. Very rarely does whealing occur on the palm of the hand. This reaction is identical with the triple response described by Lewis,[14] namely, (a) reddening, due to a primary and local dilatation of the minute vessels of the skin, (b) the flare, a widespread dilatation of the neighboring strong arterioles brought about actively through a local nervous reflex, and (c) the wheal, due to the increased permeability of the vessel walls. (This reaction he concluded was provoked by an "H" substance indistinguishable from histamine.) Usually during the treatment, the patient's face may become extremely flushed and warm. Quite often there are symptoms of headache, throbbing in the head, and sometimes vertigo. All of these symptoms subside shortly after the current is turned off. No change was noted in the respiratory rate and there was only a slight increase in the pulse rate. My findings are in accord with those of Weiss, Robb and Ellis,[17] and Harmer and Harris.[18] However, the latter obtained a slight but definite fall in systolic and diastolic blood pressure, whereas I obtained no change whatever. The blood pressure readings in my cases were made with the Tycos recording sphygmomanometer before, during and after iontophoresis. The beneficial effects from the treatment lasts from 2 to 5 hours. I have had no cases of histamine shock or collapse from prolonged treatment, although the possibility does exist, especially in the older age group. The treatment was given two or three times a week.

Table 1 is a compilation of the data on the 12 patients treated. A total of about 550 treatments were given to these patients, 10 of them having Raynaud's disease and the other 2 acrocyanosis. Of the cases of Raynaud's disease 9 were females and 1 was a male. The average age of the patients treated was 32 years, the range being 18 to 45. The average time of involvement was 5.2 years. Eight of them had no complications, and of the remaining 4, 1 had scleroderma and sclerodactylia, 2 presented necrotic ulcers of the finger tips, one of whom also had involvement of the feet, and the fourth was a case of acrocyanosis with moderate pitting edema of the right foot. It is of interest to note that 2 of the patients with moderately severe Raynaud's disease, one of 14 years' and the other of 9 years' duration, showed no fibrosis of the skin

TABLE 1

Significant data of patients

NAME	AGE	SEX	DIAGNOSIS	DURATION IN YEARS	COMPLICATIONS
A. C.	30	Female	Raynaud	5	Ulcers of both index fingers and middle finger of right hand
C. P.	42	Female	Raynaud	5	Scleroderma ulcer of middle finger of left hand
N. C.	38	Female	Raynaud	3	None
F. W.	45	Female	Raynaud	14	None
J. B.	20	Male	Raynaud	3	None
E. P.	40	Female	Raynaud	2	None
R. S.	28	Female	Raynaud	8	Small necrotic ulcers of all finger tips; feet involved
J. W.	24	Female	Raynaud	3	None
C. P.	44	Female	Raynaud	9	None
A. C.	33	Female	Raynaud	2	None
A. E.	23	Female	Acrocyanosis	7	None
R. S.	18	Female	Acrocyanosis	3	Edema of right lower extremity

and subcutaneous tissue or any terminal ulcerations despite the protracted chronic anoxemia.

Results of Treatment

In table 2 is shown the results obtained with the Hewlett Plethysmograph on the change in rate of blood inflow and hand capacity volume before and after histamine iontophoresis. The average blood inflow rate during the resting state was 7.97 c.c. Following treatment there was an average increase in 11 of the 12 patients of 3.51 c.c. or 44 per cent. The extremes were 1.10 c.c., minimum, and 8.71 c.c., maximum. One patient showed no change. The hand capacity volume following iontophoresis increased to an average of 12.18 c.c. as compared to an average of 8.26 c.c. during the resting state. This is an increase of 3.96 c.c. or 47 per cent. The same patient who had no change in rate showed a decrease of 2.2 c.c. in capacity volume. The possibility of a psychic factor was ruled out by the failure to obtain any changes in circulation when all the procedures of iontophoresis were carried out except for the application of the current.

The 1 case of scleroderma showed marked improvement in the condition of the skin of the forearms and hands. When she first came for treatment, the skin of her arms was very firm, thick, and closely adherent to the underlying tissue, and she was unable to flex the fingers. During the first few treatments it was almost impossible to obtain any whealing of the skin. Slight redness and warmth of the skin of the arm were the only manifestations of the treatment. The patient was able to tolerate 60 ma. at 110 volts at this time. After approximately 10 treatments the whealing of the skin became quite evident, even present at times on the dorsum of the fingers. The arms were extremely warm and red. The skin was less adherent to the underlying tissue and more pliable and could be pinched between the fingers. The flexibility of the fingers was very much increased to the point where the patient could make a fist touching the palm of the hand with the fingertips. The current could not be increased beyond 40 ma.

Improvement was noted by all the patients treated. The attacks of syncope and asphyxia in the Raynaud's cases were induced only after prolonged exposure to cold. The return of circulation once syncope or asphyxia occurred was much more rapid when the patient entered a warm environment. The number and frequency of attacks were reduced. In the 2 cases of acrocyanosis the color of the skin of the extremities treated remained pink and warm for 24 to 48 hours after the treatment.

TABLE 2

Pressure plethysmograph record

CASE NO.	NAME	RATE*		CAPACITY VOLUME†		RATE INCREASE AFTER IONTOPHORESIS	VOLUME INCREASE AFTER IONTOPHORESIS
		Before iontophoresis	After iontophoresis	Before iontophoresis	After iontophoresis		
1	A. C.	7.07	8.38	8.7	12.3	1.31	3.6
2	C. P.	10.80	13.23	6.0	8.2	2.43	2.2
3	M. C.	8.91	12.64	10.3	15.5	3.73	5.2
4	F. W.	9.61	9.69	9.2	7.0	0.08	−2.2
5	J. B.	8.42	9.92	12.0	18.0	1.50	6.0
6	E. P.	10.67	13.17	8.8	11.2	2.50	2.4
7	R. S.	7.41	14.74	7.7	9.3	7.33	1.6
8	R. S.	4.99	13.70	5.2	10.5	8.71	5.3
9	C. P.	7.04	10.97	6.2	13.0	3.93	6.8
10	A. C.	1.97	8.24	3.66	8.0	6.27	4.34
11	A. E.	7.90	9.0	11.86	15.5	1.10	3.64
12	J. W.	10.89	13.80	10.5	12.5	2.91	2.0
Average.......		7.97	11.48	8.26	12.18		
Percentage increase......		44%		47%			

* Rate equals c.c. per minute per 100 c.c. of hand volume.

† Expressed in c.c.

The Leitz Ultropack microscope attachment with a magnification of 11x15 was utilized for the observation of the capillaries at the cuticle of the nail fold. The latter was prepared in the usual way, first by cleansing with sodium hydrate to remove the dirt and dead epithelium, then by applying cedar oil over the area under observation to eliminate the glare of the skin. During the observation, note was made of the length, width, and tortuosity of the tufts; of their number; and of the approximate rate of blood flow through the tufts. The flow of blood in the tufts of the normal nail fold is very rapid, appearing as a shimmer, the direction of which can be easily ascertained. Each of our patients showed several but not all of the classical capillary disturbances found in Raynaud's disease, such as capillary elongation, widening, tortuosity, erythrocytic stagnation, and decreased number. The rate of blood flow varied from complete standstill to moderate flow. In many instances, the blood was at a standstill in groups of capillaries and moving very slowly in others. The conditions of flow continued uninterruptedly, and spontaneous arrest was a very infrequent occurrence, a phenomenon of automatic slowing or cessation of blood flow within the capillary tuft. Histamine iontophoresis caused an increase in the number of capillary tufts visible under the microscope and also an increase in the rate of blood flow through them. In several cases there was some difficulty visualizing the capillaries after the treatment. This occurred in those patients in whom the treatment produced a whealing of the skin of the fingers. The whealing is due to transudation of fluid from the blood vessels into the intercellular spaces because of an increased permeability of the capillary walls interfering with observation of the capillary blood flow.

COMMENT

In his original description of this disease, Raynaud stated that the cause of the condition was probably an instability of the autonomic nervous system. Lewis[19] after extensive investigations has come to the conclusion that the primary fault is a local one due to hypersensitivity of the digital arteries to relatively low temperatures and is manifest in the form of vasospasm. White[15] is of the opinion that the disease is due to vasomotor imbalance of central origin.

Following histamine iontophoresis there is an increase in the rate of blood flow of 44 per cent and in capacity volume of 47 per cent. Histamine is a capillary and arteriolar vasodilator[20] and an arterial vasoconstrictor.[21] The increase in rate of blood flow following histamine iontophoresis must be due to a decrease in the peripheral resistance resulting from a relaxation of an existing capillary and arteriolar spasm, rather than to a dilatation of the digital arteries. If the fault were primarily due to digital artery constriction there would have been no effect on the inflow rate following histamine iontophoresis. Therefore, the capillaries and arterioles must be actively contracted in Raynaud's disease causing obstruction to the flow of blood through them, since relaxation of this spasm by histamine increased the rate of blood flow.

The increase in capacity volume is a result of either an increase in size of the capillaries already patent (change in tonus) or an increase in the number patent, or both. Since alteration in tonus alone cannot account for marked changes in capacity volume,[22] the increase must be the result of an increase in the number that are patent.

One other type of experiment performed offers more conclusive evidence of the type of blood vessel involved and the site of action. Following histamine iontophoresis one hand was immersed in cold water (15° C. to 18° C.), which Lewis[23] states as the optimum temperature for inducing an attack. The hand was allowed to remain in the water for 5 minutes, which resulted in pain at times almost intolerable to the patient. If the digital artery is the point of involvement, the local cooling following the use of a drug which caused arterial vasoconstriction should have exaggerated the vasospasm. However, no vasospasm occurred in the immersed hand nor in the opposite hand, which may have been expected to react reflexly if the fault were of central origin. The capillaries and arterioles, therefore, play an active role in the vasospasm of

Raynaud's disease and the fault is primarily a local one.

Histamine is easily handled in ointment form, is comparatively inexpensive; the effects appear immediately and endure for an average of 5 hours, and the average time consumed by the treatment is 20 minutes. I believe that the limited use of this drug in peripheral vascular diseases is due to the use of improper technic with failure to obtain maximum effects and perhaps also to fear of a histamine reaction. I have had no untoward symptoms from the use of this drug.

Conclusions

1. The treatment of Raynaud's disease and acrocyanosis with histamine hydrochloride iontophoresis has been presented.
2. Ten cases of Raynaud's disease, 9 female, 1 male, and 2 cases of acrocyanosis, both female, have been treated with this form of therapy.
3. The rate of blood inflow and hand capacity volume has been shown to increase 44 per cent and 47 per cent respectively following treatment.
4. Capillary observation done before and after iontophoresis shows a marked acceleration of blood flow due to treatment.
5. Symptomatically the patients have been afforded much relief, and the frequency and duration of the attacks (in Raynaud's disease) have been decreased.

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Reports dried human plasma is helpful for hemophilia. Dried human plasma was found effective in 5 patients in the management of hemarthroses, hematuria and tooth extractions in patients with hemophilia, John B. Johnson, M.D., Washington, D. C., reports in *The Journal of the American Medical Association* for March 7, 1942.

He explains that in recent years several agents have been proposed in the treatment of hemophilia but that the most effective treatment still has been the transfusion of compatible blood. Certain inherent difficulties in this method limit its use practically to critical emergencies.

"For many years it has been known that the plasma of normal blood contains a substance effective in reducing the coagulation time of hemophilic blood to normal," Dr. Johnson says. "This substance has been shown to be associated with the globulin fraction of the plasma. Hitherto no practical method has been worked out by which the effective agent in plasma can be made generally available for therapeutic use."

The method reported by him involves the rapid drying of frozen plasma in a partial vacuum at a low temperature. Just before injection, the dried plasma is dissolved in a physiologic solution of sodium chloride and injected into the vein of the patient with hemophilia. He says that about one hundred injections of such plasma have been given to 5 patients without typing and in only one instance was there any reaction. This consisted of a chill and a rise in temperature lasting about one hour. There was a prompt response to the injections.

"One of the most satisfying results of the type of management under discussion," Dr. Johnson says, "has been the elimination of the fear of tooth extractions in patients with hemophilia. The removal of two or more teeth on three occasions in 2 patients was managed by the use of plasma alone. A dose of 150 cc. of plasma reduced the coagulation time to normal. . . . "

He says that the effectiveness of this type of plasma is maintained for at least three months when it is kept at 5°C.

MANAGEMENT OF PSYCHONEUROSES

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UNLIKE the speakers who preceded me, my presentation will be more informal, which is in keeping with my usual attitude toward patients and students.

From my own experience I must emphasize one of the points made by Drs. Lebensohn and Groh. Time is the point which I want to discuss first. In any type of psychotherapy one of our most important considerations is that of time. We are obliged to set aside definite periods of time for each patient whom we interview or treat. It will do you no good to quarrel with this principle because it is a fact, and if you can not, will not, or do not subscribe to it, you had best give up any attempt at this type of treatment. By the time the neurotics see you, they have often been ridiculed, held up to derision, scolded, browbeaten and otherwise made to feel inferior in many respects. Our prime efforts are aimed at not only encouraging the patients to talk, but actually inviting and forcing and even coercing them into talking. We must appreciate the fact that each patient we see presents a specific problem, and while it is true that we may quickly learn much about him, we are obliged to subscribe to the practical point that the answer to the patient's symptoms and problems lies within himself. It is by the use of our knowledge, skill and experience that we extract the information and present it to the patient in such a fashion that he can understand it, put it together, and be in a position where this knowledge has conviction and meaning for him. If we attempt to hurry or make fun of a patient, scold him or treat him in any fashion not based on sympathy, understanding, and the desire to help him, he will not talk and we will have failed in the very beginning of our attempt at managing.

I wish to make a special point regarding the taking of notes. When I tell you it is not advisable to take notes in treating neurotics, I know I am preaching heresy. But from my experience I can tell you several good reasons to substantiate my contention. Most patients are very polite and considerate, especially to the doctor. When they observe that he is having difficulty in recording what they say, they will often speak more slowly to permit him to catch up with their remarks. By this means one disturbs the spontaneity and continuity of the patient's talk. In addition there is a certain group of people who do not wish their remarks recorded. We are obliged to respect their wishes if we want to help them. Another point to bear in mind is that we must concentrate upon what the patient is saying, rather than merely record every word of what he says. All of you have had the experience of going to a lecture and recording the words of the speaker exactly. However, when one is asked to tell what the speaker said, he is sometimes unable to do so because although all the words were copied, one had not actually heard what was said. Therefore we must cultivate a good memory, listen carefully to the patient, and then make records in his absence.

It is an excellent plan always to arrange interviews so that one speaks with the patient alone and not in the presence of husbands, wives, relatives, friends, etc. In a certain number of cases the patient is willing to talk about matters of which he is ashamed, or for other reasons reluctant to discuss, but he will do so only if the conditions are conducive. It is often hard enough for him to be induced to talk to one person and increasingly difficult or actually impossible for him to make disclosures in the presence of other people. No matter what the patient discloses to us, we must remember that we are not policemen, judges, preachers, or anything else except physicians. We must never scold, criticize, or in any way censure patients for what they tell us, because if we do, they will often stop talking to us and then we are put in a position of not being able to help them at all. Remember, as I have already indicated, the answer to any person's problems lies within himself. If the patient does not give us an opportunity to use our skill and experience, we can never get to him and therefore can never be in a position to help him.

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* Part of a panel discussion on this subject conducted before the Society, October 22, 1941.

I trust that I am not too unorthodox if I present a viewpoint which may seem rather extraordinary to you. In many respects I am impressed by the fact that physicians are detectives. This idea may not have occurred to you, but we really are detectives. Don't patients come to us with clues which we call symptoms? And don't we uncover other clues by taking a history and performing various types of examinations? We put these clues together and arrive at a solution to the mystery which we call making a diagnosis. The more obscure the clues, the harder we must work; and if the case defies our efforts, do we not seek the help of a detective more skilled and experienced than we, a consultant or specialist of some type? In our diagnosing all of us are sufficiently astute to know that the presenting symptom or chief complaint is rarely the eventual disease which is uncovered. All detective story readers know that in the opening chapter all the clues invariably point toward one particular person, but no veteran reader is fooled by this subterfuge because he knows from his experience that this apparently guilty person has never yet committed the crime; it is always someone toward whom no suspicion points in the beginning. So it is with medicine in general and managing psychoneurotics in particular: the symptoms for which the patient seeks relief are rarely the basis of his difficulties. They are merely the signs or symptoms of some deeper process, and bear the same relation that coughs do to respiratory diseases and fever does to the infectious diseases. In medical practice one of our outstanding principles is not to treat symptoms but to diagnose the basis and treat that. All of you know very well that edema of the ankles is never treated as such; we know that the cause of such an edema is almost always in some part of the body quite removed from the ankles.

One of the most important factors involved in the managing of psychoneurotics is that of the patient's intelligence. The greater the patient's intelligence, the more potentialities there are for help by means of psychotherapy. Unintelligent, stupid people cannot understand, appreciate, or have conceptions of certain explanations which we must get across to them in order to provide them with an understanding of their symptoms. In the past year or so, I have been impressed by the fact that I find myself treating many of my patients as if they were medical students. I find myself giving patients explanations and talks quite similar to those which I give to medical students. In a similar fashion, I have told the students that I regard them as intelligent laymen, and handle them (the students) accordingly. By means of proper questioning and skillful guidance the patients can arrive at an understanding of their difficulties. Obtaining this is called "insight."

It is my belief that the improper handling of neurotics is due primarily to poor training in school. For that reason we are now attempting to base our teachings in the Department of Psychiatry upon a practical basis and to show the students that the principles which they are taught are useful in actual practice. During their third and fourth years we encourage students to search for and attempt to handle the emotional and neurotic symptoms in the patients whom they see in the clinics and wards of the hospitals. We are told that from 40 to 60 per cent of the patients seen in medical practice have either no organic basis, or insufficient organic basis, for their complaints. It is for this reason that future students should have much more time in the medical school course devoted to the handling of psychoneuroses. If the students are better trained they will handle their patients better.

So often our patients tell us that they are most satisfied when they arrive at an explanation and understanding themselves. Over and over again these patients stress the important point that they must have an explanation that will satisfy them. For that reason we must know that logical explanations based upon reason and authority do not always satisfy people. The emotions must be taken into consideration, and he who does not subscribe to this principle must never undertake psychotherapy because he will deprive himself of a most useful tool and automatically be unsuccessful. An example of the above principles occurred in the case of an exceptionally intelligent, highly trained lawyer who was worried over the late effects of masturbation. Over a period of two years several physicians had attempted to give him a physical explanation for a most obvious set of emotional symptoms. His last physician recognized the emotional background of the man's problem and attempted to use psychotherapy. Unfortunately he did not select the proper type of therapy, just as a surgeon may occasionally fail to employ the proper incision for an operation. This physician attempted to use logic, reasoning and the citing of authorities to disprove this man's emotional state. The physician was unsuccessful for two good reasons: the patient was better trained in logic and reasoning than the physician, and in addition the patient had read many of the authorities on masturbation and knew the answers better than the physician. When the patient's situation was presented to him as an emotional problem, he quickly recognized the validity of such a viewpoint and immediately uncovered a great many factors which had conviction for him, and arrived at an explanation which satisfied him. With the direct help from this explanation the patient's symptoms disappeared.

In closing, may I take the liberty of pointing out a common condition which is being frequently missed in the practice of medicine. In my own experiences in the last few years I have been repeatedly impressed by the frequency with which some physicians fail to recognize depressions. Again may I point out that this failure is probably due to poor training in school. But no matter what the cause is, I feel it my duty to point out this delinquency to you. It is most important that physicians recognize depressions because of the grave danger of suicide, the excellent prognosis in most of the types of depressions, and the really remarkable and immediate response to shock treatment. So often when physicians are confronted with a typical depression, they believe that the patient is not ill at all but is malingering, attempting to gain attention, and otherwise being childish and unreasonable. (The foregoing expressions are taken from remarks made directly to me by physicians.) It is a shame to withhold treatment from most of the depressed patients, because they are, on the whole, excellent citizens who mind their own business, work hard, pay their bills, are conscientious, and stay out of jail. People with depressions are just as seriously ill as those with pneumonia or acute appendicitis and must be regarded and cared for accordingly.

Vitallium plates for skull defects. The use of stock plates of vitallium to repair defects of the skull appears to be satisfactory, CLAUDE S. BECK, M.D., Cleveland, declares in *The Journal of the American Medical Association* for March 7, 1942, in a preliminary report which he says is made because such plates might be useful in the care of war wounded. "In the absence of infection," he says, "it might be possible to repair skull defects of war wounds at the primary operation." Vitallium is an alloy of cobalt, chromium and molybdenum. As Dr. Beck points out in his report, the use of this material in repairing skull defects has been previously reported. "I had the idea of using plates made up in various sizes and kept in stock so that the surgeon could use them when needed," he says. These ready made vitallium plates have been used by Dr. Beck in 4 cases, the first ones being put in place sixteen months ago, and have produced no evidence of tissue reaction.

INTRAMYOCARDIAL BULLET LOCALIZED BY ROENTGENKYMOGRAPHY*

Report of a Case

MORRIS SILVERMAN, M.D.
Washington
ARTHUR M. COVE, M.D.
Brooklyn, N. Y.

APPROXIMATELY a few hundred cases of foreign bodies in the heart have been reported in the literature to date. Most of these have been due to gunshot wounds. With the trend of present world affairs, any aid to the localization of these foreign bodies in the heart should be used. The commonest site where these foreign bodies lodge is in the ventricular wall. In the order of frequency these foreign bodies have been found in the wall of the right ventricle, left ventricular wall, pericardial sac, heart chambers, and the walls of the auricles respectively.

The problem of surgical removal always arises at the time of injury, but at present the majority of authors maintain a conservative attitude regarding intervention. When indicated the accepted method is to await the passing of the immediate effects of the trauma in order to determine what damage has been done and what is the likely outcome if the body is allowed to remain in situ. Tamponade of the heart by hemopericardium produces a situation of utmost urgency. The value of aspiration of the pericardium in this type of complication varies with different authors. All agree, however, that indiscriminate puncture is dangerous.

The localization of the foreign body is of utmost importance in determining the necessity of surgical intervention. Decker[1] states that fixed intramural foreign bodies usually do not cause death or shorten life, and our case certainly supports that contention. He also maintains that sharp-edged bodies in either the heart chambers or in the pericardial sac are an absolute indication for surgery, because of the danger of perforation of the heart. Foreign bodies in the heart wall tend to be surrounded by a fibrous scar which because of its weakened structure may give rise to cardiac aneurysm.

The case we are reporting is of special interest because of the long asymptomatic duration of the bullet in the heart musculature and the direct localization of it by roentgenkymography. As far as we have been able to ascertain only 1 case has been reported in the literature of a foreign body in the heart exceeding that of 41 years, the duration in this case. Cutler[2] in 1935 reported a case of a bullet in the pericardial sac for a period of 52 years. There has been no mention of localization by roentgenkymography in the American literature. For the principle of roentgenkymography may we refer you to the work of Hirsch.[3] In the French literature Cottenot and de Balsac[4] reported 2 cases of bullets in the heart which were localized by roentgenkymography. In 1 of their cases the bullet had been present in the right ventricular wall for approximately 25 years. The other was localized in the left auricular chamber because of its disorganized and irregular movements as demonstrated on a roentgenkymogram. They stressed the value of this method of localization of bullets in the heart.

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* From the Roentgenological Division of the Kings County Hospital of the Department of Hospitals of the City of New York; Dr. Richard A. Rendich, Director.

The bullet in this case was discovered accidentally during a radiographic study of the gastrointestinal tract, whereas a chest film taken just previously had failed to reveal its presence. During fluoroscopic examination of the chest one could see that the movement of the bullet occurred simultaneously with the contractions of the left ventricle. Analysis of the roentgenkymogram demonstrated that in the region of the bullet there was a reversal of the direction of movement of the myocardium, i.e., during systole there was outward motion of that segment of the heart in which the bullet was imbedded. Since these findings have also been described in association with coronary thrombosis and infarction, it is assumed that the bullet had been surrounded by a fibrous scar simulating an area of infarction.

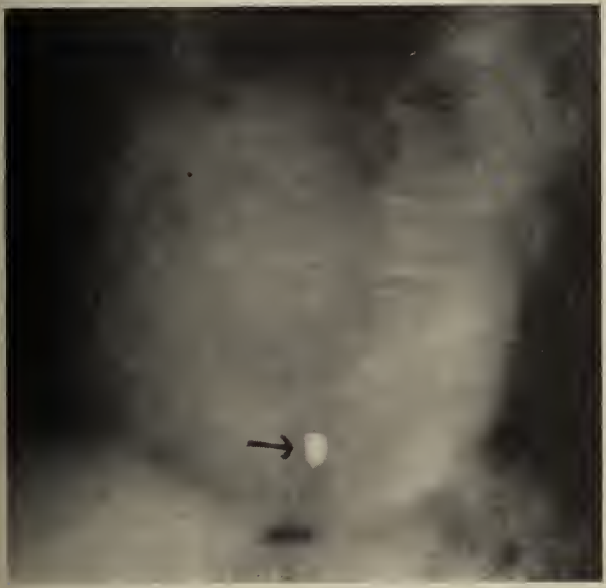

FIG. 1. Left anterior oblique view of chest illustrating position of bullet in left ventricle and marked enlargement of left ventricle and auricle (arrow is pointing to bullet).

REPORT OF CASE

The patient was a 64-year-old married white man, a butcher by trade, who was admitted to Kings County Hospital in April 1939 for decompensated cardiac disease. The gastrointestinal studies were done because of vague abdominal complaints. The patient improved and was discharged several weeks later. He was readmitted several times, the last admission being in December 1940. At the present time he is well compensated and taking a daily maintenance dose of digitalis. Upon delving into his past history it was revealed that 41 years previously, at the age of 23 years, he had attempted to commit suicide by shooting himself in the head and chest. The bullet was removed from his skull a week after the accident, and the patient did not experience any difficulties until 30 years later, when he began to have signs and symptoms of cardiac disease. On and off during this period he had numerous breaks in compensation and had been taking digitalis. The patient has had no other serious illnesses or surgical procedures. No history suggestive of rheumatic fever could be obtained.

FIG. 2. Left anterior oblique roentgenkymogram of heart. The bullet is noted by irregular area of increased density in lower portion of film. That the bullet pulsates is readily discernible. Arrows indicate opposite movement of bullet in relationship to cardiac contraction.

Physical examination revealed a grossly enlarged heart, the apex reaching the sixth interspace 12 cm. to the left of the midsternal line. A soft presystolic murmur was heard at the apex, and the pulse was grossly irregular. The blood Wassermann was negative. An electrocardiogram showed auricular fibrillation and evidence of coronary sclerosis on several examinations. No

(*Continued on page 166*)

President's Page

MEETING THE CRISIS

President Roosevelt's recent statement that "never before have we had so little time in which to do so much" does not come as news to men in medicine. It is fair to say that in the past two years members of the Medical Society of the District of Columbia have established an enviable record of service to the country. However, in the present crisis greater demands will be made upon the profession, for we are facing the supreme test as a nation.

As President of the Medical Society, I feel that all our undertakings should be related to the war effort. Among the activities which it seems to me might be omitted this year is President's Night. I propose the omission not upon personal grounds but because of the demands made upon our resources and energies. I feel that members of the Medical Society will sustain me in this decision.

Henry R. Schreiber

Editorials

CORONARY ARTERY DISEASE

In the past few years, remarkable advances have been made in the study of coronary artery disease, especially in the correlation of the clinical and pathologic findings. By means of a careful injection-dissection technic, Blumgart, Schlesinger and their co-workers[1,2] have clarified our knowledge of the pathologic basis for various clinical syndromes. These authors have confirmed that cardiac pain results from a relative disproportion between the demands of the myocardium for blood and the supply of blood provided by the coronary arteries. They have shown that the clinical syndrome which develops in any case as the result of such a disproportion depends upon the degree and duration of the disproportion, irrespective of its pathogenesis. Their work has further demonstrated the need for a more meticulous selection of terms for the description of the various types of pain which have their origin in myocardial ischemia. They have deplored the promiscuous use of the term "coronary thrombosis" or "coronary occlusion" on the ground that this is a purely pathologic description of a condition which may or may not be evident clinically.

The terms "angina pectoris," "coronary failure" (coronary insufficiency), and "acute myocardial infarction" are advocated to distinguish the various syndromes of cardiac pain. Under this terminology, coronary failure is the only designation which is not immediately self-evident because of previous usage. This term is employed for the description of the syndrome of cardiac pain resembling angina pectoris in all respects except that it is of considerably longer duration. Coronary failure, therefore, presupposes the existence of myocardial ischemia for a longer period than in angina pectoris but without the development of symptoms and signs of acute myocardial infarction. Coronary failure is usually precipitated by some factor which decreases the coronary flow, such as tachycardia, shock or hemorrhage, or which increases the work of the heart and the oxygen requirement of the heart muscle, such as hypertensive crises or postoperative complications. Master, Dack and Jaffe[3] have emphasized that coronary insufficiency commonly occurs as a premonitory symptom of acute myocardial infarction and may occasionally precede the onset of the myocardial infarction by as long as two or three weeks.

Unfortunately, the etiology of coronary artery disease remains obscure in most respects. However, the appreciation of the fact that the disease of the coronary arteries is not necessarily harmful in itself has been helpful. Thus, severe coronary artery sclerosis may cause little trouble, providing that it does not engender myocardial ischemia. As a fundamental corollary of this statement, it must be added that the failure of coronary artery disease to cause myocardial ischemia depends upon the development of an adequate intercoronary collateral circulation. This concept has led to a more lively interest in the factors which precipitate myocardial is-

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[1] Blumgart, H. L., Schlesinger, M. J., and Zoll, P. M.: J. A. M. A., 1941, **116**, 91.

[2] Blumgart, H. L., Schlesinger, M. J., and Davis, D.: Am. Heart J., 1940, **19**, 1.

[3] Master, A. M., Dack, S., and Jaffe, H. L.: Ann. Int. Med., 1941, **14**, 1155.

[4] Master, A. M., Dack, S., and Jaffe, H. L.: Am. Heart J., 1939, **18**, 434.

[5] Boas, E. P.: Ibid., 1942, **23**, 1.

chemia, particularly ischemia of such degree and duration to cause myocardial infarction.

Exhaustive analysis[4] of the activities which were associated with the onset of acute myocardial infarction in 1,440 attacks gave a disappointingly fatalistic viewpoint to the problem of prevention. On the basis of the statistical evidence in this study, it was concluded that occupation, social status, physical activity, meals, emotional excitement, infections and trauma did not predispose to myocardial infarction. It was implied that association of myocardial infarction with any of these factors is purely fortuitous and that the attempt to prevent myocardial infarction by altering the patient's mode of living is a useless gesture. It was acknowledged, however, that surgical procedures are a possible exception to these statements. In a way, the conclusions drawn from this statistical study were a strong contradiction to the clinical and pathologic research of Blumgart et al.

Fortunately, in spite of the statistical evidence, many cardiologists have retained a hopeful confidence in their ability to influence the course of coronary artery disease. They have stressed the importance of controlling tachycardia, heart failure, obesity, hypertension, and other physical and emotional factors which may precipitate myocardial ischemia in the patient with coronary artery sclerosis. In support of this attitude, a recent publication by Boas[5] cites case histories to illustrate the fact that the onset of myocardial infarction is often preceded by specific events which seem to be directly responsible for the acute episode. He concludes that effort, emotion, cold and overeating are the most common external precipitating factors.

Although it will undoubtedly be many years before the essential factors responsible for the development of coronary artery sclerosis and coronary artery thrombosis are discovered, a hopeful and optimistic attitude must be taken. We are learning that acute coronary occlusion does not necessarily mean an early demise. Above all things we must avoid making our patients the victims of cardiac neurosis, a disease probably worse than death itself.

HEALTH, DISABILITY AND MEDICAL CARE

Ever since President Roosevelt's budget message to the Second Session of the Seventy-seventh Congress on January 7, 1942, in which he recommended "an increase in the coverage of old-age and survivors' insurance, addition of permanent and temporary disability payments and hospitalization payments beyond the present benefit programs, and liberalization and expansion of unemployment compensation in a uniform national system," there has been speculation as to further steps which would be taken.

In an editorial "especially authorized and approved by the Board of Trustees of the American Medical Association," *The Journal* of the A.M.A. (March 5, 1942) reports that various conferences have been held in Washington with representatives of the Social Security Board, the net result being the "impression that the proposal of the President involves primarily a plan to increase taxation under the Social Security Act by 1 per cent, of which 0.5 per cent is to be paid by the worker and 0.5 per cent by the employer, with a view to providing every insured worker or his dependents during periods of hospitalization with the sum of $3 a day. The plan would involve also allowances in cash to cover disability equal to the present allowances for unemployment during periods of sickness. This proposal apparently had its origin in the report of the Technical Committee on Medical Care, which introduced the so-called National Health Program in the National Health Conference in Washington in 1938."

The Journal then reviews actions taken on various occasions by the House of Delegates of the American Medical Association as they relate to voluntary hospital and medical insurance plans and compulsory sickness insurance. Efforts of the Social Security Board to further the cause of the latter are also set forth.

From the Sixth Annual Report of the Board (1941), it is learned that

> "Problems related to health, disability, and medical care continued to receive attention during the year, particularly in their bearing on the social security programs administered by the Board and their relation to the need for additional social security measures. A study of available information indicative of the extent of economic insecurity incident to ill health and disability was continued during the year; further analysis was made and cost estimates and alternative specifications were prepared for specific legislative proposals in this field. These studies included detailed examination of American and foreign experience for information on the extent, duration, and frequency of temporary and permanent disability under various conditions and among various segments of the population; analysis of old-age and survivors insurance wage records and other data for information on the characteristics of groups affected by these hazards; and investigation of administrative problems and experience in workmen's compensation and other social insurance systems, with respect to such factors as benefit formulas, waiting periods, and methods of certifying disability.
>
> "An attempt has been made to obtain precise current data on the costs of medical care as a factor in economic insecurity, and consideration has been given to various proposed methods for providing more nearly adequate medical care, especially for groups affected by social security programs. Particular attention was centered during the year on the medical needs of recipients of public assistance and on provisions for meeting these needs. Cost estimates of various types of medical services for special groups have been prepared, and analysis of experience under various types of voluntary plans for prepayment of the costs of medical care, including hospitalization, has been continued to gauge the extent and nature of needed services and personnel."

Mr. Arthur J. Altmeyer, Chairman of the Social Security Board, stated to the Congress in July, 1941:

> "Our eventual goal should be the establishment of a well-rounded system of social insurance to provide at least a minimum security to individuals and their families due to unemployment, sickness, disability, old age, and death. In addition, we must provide a series of constructive social services to supplement the cash aids provided under social insurance. Medical care should be available to individuals and their families so that we may build a healthier, happier nation. Such a system of medical care would be instrumental in reducing the costs of cash payments for sickness and disability."

All this activity on the part of the proponents of a Government system of medicine comes as no surprise to those of us who live in the Nation's Capital. It is to be regretted that so few of the medical profession are aware of the efforts being made to bring about radical changes in medical practice. Not tha all proposals being made are to be condemned. As a matter of fact, some changes are necessary. However, the medical profession should be informed fully in regard to them and their role in the development of more effective health procedures should be a dominant one. Whether or not this will be true will depend upon the alertness and interest of the profession and on the crystallization of medical opinion.

PERTINENT PARAGRAPHS

March Meetings

With the appointment of the Committee on Arrangements for the 14th ANNUAL SCIENTIFIC ASSEMBLY, activities pointing toward one of the most outstanding meetings sponsored by the Society will get under way. In the meantime, regular boards and committees continue to function and regular scientific meetings have been held.

The following meetings were held during March:

March 4	Business Meeting of Society Executive Board
March 11	Subcommittee on Child Welfare

	Section on Pathology and Laboratory Medicine
	Scientific Meeting of Society
March 14	Section on Pathology and Laboratory Medicine
March 16	Obstetrical Board
March 18	Advisory Committee to Social Welfare Organizations
	Scientific Meeting of Society
March 20	Section on Ophthalmology and Otolaryngology
March 25	Scientific Meeting of Society
March 26	Section on Pediatrics
March 30	Subcommittee on Program, Annual Scientific Assembly
	Executive Board
March 31	Board of Censors

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Training Physicians for the Future

"Faced with rapidly changing professional, social and economic conditions, the doctor in practice and even more the student in medical school wonders about his place in the social universe. In general, he is surprised and confused, often even embittered, by developments he finds hard to understand. This alone would be sufficient reason for an educational project to promote understanding of problems which are inevitable. In addition, there are a growing number of new professional opportunities in the field of medical care. Many of these special lines might attract forward looking men. Yet, at present, physicians as well as medical students have little chance of learning about these possibilities, not to mention the lack of provisions for more intensive study. Those who want to go into the service of public or private agencies administering medical care programs are still compelled to learn on the job by trial and error; they may serve with welfare departments, prepayment plans for medical care, or group hospital plans. Whether such a situation is economical is open to serious doubts. That learning on the job may produce men with considerable skill in carrying out strictly limited functions is certain. What cannot be obtained this way is the broad background and the comprehensive knowledge of basic principles and essential facts. These alone give the firm foundation necessary to tackle any problem related to organization and administration of medical care programs."

Thus Dr. Franz Goldmann prefaces a description of the broadening of a plan of instruction in the social and economic aspects of medicine at Yale University School of Medicine, where he is Associate Clinical Professor of Public Health. Dr. Goldmann describes two additional courses in this field in the March, 1942 issue of the *Connecticut State Medical Journal.*

"Beginning with 1939, medical students have been offered an elective course dealing with problems confronting the physician in the changing social scene. This course of about ten two-hour sessions tries to give a broad orientation on the interrelationship between medicine and the functions and problems of society. In the selection of subjects and their presentation emphasis is laid on problems with which both the individual physician and the profession at large have to struggle today. Interpretations of both the rise of scientific medicine and economic and social developments during the last decades as to their bearing on contemporary medical practice form the background against which all discussions are projected. The number, geographic distribution and ratio of physicians to population; trends of medical education; income of physicians; the place of the physician in the community health program are described and interpreted from the point of view of the individual physician, the profession at large, and the community. The development of the modern hospital; the extent to which private groups and public agencies have assumed responsibility for establishment of facilities and provision of hospitalization; the actual place of the non-government and government hospital in the community health program; the efficiencies and deficiencies in the hospital field are discussed as much as warranted by the interests of the group taking the course. The analysis of available personal and material resources is followed by consideration of their actual utilization. Here the emphasis is on the extent to which services by physicians, dentists, nurses and hospitals actually are received by various income groups; on the expenditures of the family and the nation for medical care; and on the conclusions that can be drawn as to need and demand for medical care. The actual situation is appraised from the angle of the consumers of medical service, the producers of medical service, the hospital and the community—in each case under strong emphasis on democratic concepts. The final part of discussions revolves around the efforts to overcome the discrepancy described by William H. Welch as '. . . a woefully ineffective distribution service (of medical care), as compared with its marvellously effective production service. . . .' Medical care programs sponsored by medical organizations, groups of consumers, industry and business, institutions of higher learning, and voluntary and public agencies are analyzed. Methods of organizing physicians' services as well as methods of paying for medical care are interpreted as to their actual achievements and potentialities both in quality and quantity. In describing how enthusiasm has crystallized in programs the timeless rather than the latest word or somersault movements are stressed. Policies which have proved to be sound are distinguished from blundering procedures which have spoiled or killed good ideas.

"In addition to this project for medical students a comprehensive plan of instruction in social and economic aspects of medicine has been developed for specialists in health and welfare work who study at the Department of Public Health, Yale School of Medicine. This program is now in its third year of operation. At present the schedule is as follows:

(1) Lectures combined with discussion periods and reports by students on assignments are given in about 30 sessions during the first term, twice a week for two hours.

(2) Within this course guest speakers are given the opportunity to present their personal opinions on controversial questions so as to give the students as complete a picture as possible.

(3) In addition to the theoretical training students are offered the opportunity to visit certain institutions and agencies to get a first hand knowledge of such forms of organization and administrative procedures as are essential to the understanding of basic problems.

(4) Important problems of purely administrative character are discussed in a seminar in connection with the department's course on Public Health Administration. So far, four two-hour sessions have been set aside for this purpose in this course."

Dr. Goldmann states that the manner of presenting the social and economic aspects to medical students at Yale is "admittedly incomplete." However, he believes that "one of the questions that will soon arise and ought to be earnestly considered in a long range program in this field is this: What can be done for the practitioner of medicine, the physician who fulfills a vital social function in his daily work?"

First Aid Fever

The enthusiasm with which thousands of citizens have taken to first aid has been a source of pride as well as concern. Most of us quail at the thought of being given first aid by the majority of those recently trained. Fortunately few will have the opportunity of putting their training to the test of actual performance. Of the greatest value will be the knowledge they have gained of what not to do for an injured person. This of itself may prove very useful in time of an emergency. However, the question still arises if too much emphasis has not been placed on first aid training to the exclusion of other more important services. This point of view is well stated in the March 12 issue of the *New England Journal of Medicine*, which editorializes as follows:

"When the first-aid fever has died down a bit, when the last sacroiliac strain, the result of overzealously applied artificial respiration, has been strapped, when the last broken rib has mended and when the last breathless housewife has received her certificate, we may recall the sober fact that not one in a thousand of our first aiders will ever have occasion to adjust a traction splint or save a life by applying a skilful finger to a pressure point, but that everyone who has taken the equivalent course in nutrition or home nursing will probably have plenty of opportunity to employ the knowledge gained before the year is out. This war will be won by having the greatest number do that for which there is the greatest need and by having each willing to perform faithfully that service for which each is best fitted."

In a recent bulletin issued by the Office of Civilian Defense, it is announced that nursing service is being rapidly organized to take its place in the civilian defense program. Both the O.C.D. and the American Red Cross are urging promotion of the Volunteer Nurses' Aide program to train assistants for nurses. It is stated that one hundred thousand must be trained within the next few months to assist nurses in casualty receiving hospitals and in field casualty services. Home nursing courses are also to be given so that more women will be prepared to care for sickness in their own homes during an emergency and relieve hospitals of some of their load.

Nutrition service committees are also being organized throughout the country. These are offering courses in which considerable interest has been shown.

Both of these services will be of growing importance in the months to come and it is to be hoped that there will be prompt response to the call for volunteers.

* * *

House Officers' Night

Although attendance at House Officers' Night held in the Medical Society's auditorium on the evening of March 25 was disappointing, those present were well rewarded. More enthusiasm has seldom been shown for papers presented at a scientific session than on that evening.

Prizes in the form of choice medical volumes were awarded by the Program Committee to the essayists. Awards were as follows:

First Prize	"Problems in the Local Use of Sulfonamides" Dr. Roy G. Klepser, Assistant Resident in Surgery, Gallinger Municipal Hospital.
Second Prize	"The Influence of the Bacterial Flora on the Cultivation of Endamoeba Hystolytica" Dr. Ben D. Chinn, Junior Medical Officer, St. Elizabeth's Hospital.
Third Prize	"Influenzal Meningitis: Evaluation of Treatment and the Use of Sulfadiazene" Dr. Irving B. Brick, Intern, Gallinger Municipal Hospital.

Honorable mention was given the following for their contributions: Dr. Virginia Cull, Children's Hospital; Dr. Richard H. Todd, Chief Resident Physician, Children's Hospital; and Dr. Joseph J. Weinstein, Gallinger Municipal Hospital.

House Officers' Night should become a permanent feature of the Society's scientific program for it serves a most useful purpose, that of stimulating research and original investigation by younger physicians. Furthermore, it enlightens members of the Society in regard to the latest advances in medical knowledge. The Program Committee is to be congratulated on its initial effort in this direction.

* * *

Subscribe Now to Medical Bureau

The summer and fall telephone directory which is to be issued July 1 goes to press on May 27. This will be the last date on which physicians wishing to subscribe to Medical Bureau Alternate Listing Service can obtain the special listing—"If no answer call Medical Bureau, Republic 6100." Contracts for this service and forms on which to provide the Bureau with information can be obtained on application at the Society's office. Physicians are reminded that the next telephone directory will not be issued until December 1 and that Medical Bureau can be of special value to them during the summer months. Solve your telephone problems the economical way by subscribing to Medical Bureau.

* * *

Conference on Medical Service Plans

The first Conference on Medical Service Plans was held in Chicago on February 14, 1942, at the headquarters of the American Medical Association and at the Palmer House. Sixty-four persons were present, including representatives from operating and proposed medical service plans in seventeen states and officers of state and county medical societies.

Dr. Olin West, Secretary and General Manager of the American Medical Association, welcomed the representatives and stated: "You are distinctly a part of a great movement that is essential to the welfare of the people of this country and it is highly desirable that you should get together to exchange information and opinions in order to arrive at a basic understanding of the problems involved."

Mr. J. D. Laux of Michigan Medical Service, who was elected Chairman of the Conference, indicated that interest in some form of prepayment for medical services has been moving along three well-defined fronts: (1) group clinic or consumer plans such as the Ross-Loos Clinic or the Transport Workers Medical Plan, of which there are seventeen such plans in operation with a total enrollment of 100,000 persons; (2) employee-employer mutual benefit associations (300 in operation) and the commercial insurance company plans (at least 250) providing cash indemnity benefits totaling $365,000,000 annually; and (3) non-profit medical service plans sponsored by medical societies, of which there are 33 plans in operation in 9 states with an enrollment in excess of 750,000 persons.

Consideration was given to the basic principles and major problems involved in medical service and limited surgical benefit programs sponsored by medical societies. The following are some particularly pertinent points brought out in the discussion:

> Contract practice plans limiting service to a small number of physicians cannot provide a satisfactory service for an entire community. Non-profit community-wide or state-wide service plans are the proper type of organization for prepayment of medical services.
>
> The statement that voluntary plans lead to compulsory insurance applies to the chaotic situation created by a multiplicity of lay controlled or commercial plans, not to medically sponsored community programs.
>
> In medical society sponsored programs, the contribution of the profession is the offering of services without additional charge to persons in the under-income group. Under a plan providing cash indemnity, the only thing the medical profession furnishes—service protection to the individual—would be taken away.
>
> Experiments in the full coverage type of medical service plan are being undertaken to determine the effect of such plans on the private practice of medicine.
>
> A differential arrangement for specialists is a problem which one medical service plan treats in the following manner: When a subscriber uses a specialist as his family physician, the specialist receives general practitioner fees for such service. However, in the event the subscriber is referred to a specialist by his family physician for special services, an increased fee is paid. To be eligible for increased fees, the specialist must confine himself strictly to his specialty.
>
> Enrollment based on individual physical examination does not furnish as good selection as group enrollment.
>
> The desirability of establishing somewhat uniform or model legislation for medical service plans was emphasized.
>
> The question of the extent of joint operations with hospital service plans and the appropriate basis for coöperation lead to the establishment of a committee to meet with a committee from the hospital service plans.
>
> It is of the utmost importance to establish a centralized agency for the collection and dissemination of information. R. G. Leland, M.D., Director of the Bureau of Medical Economics of the American Medical Association, outlined a program of coördination through establishment of a glossary of terminology, an organizational outline of the plans, and a composite tabulation of financial and statistical reports.

The Conference concluded with the appointment of a committee to determine the best method of establishing a permanent organization of medical service plans throughout the country.

War Section

STATE HOSPITAL OFFICER

Appointment of a state hospital officer as an official of Emergency Medical Service has been recommended by the Medical Division for densely populated states in the target areas. These areas are principally in the First, Second, Third, Fourth, Eighth and Ninth Defense Regions.

The principal function of the hospital officer will be the planning of emergency base hospitals for the reception of civilian casualties and other hospital evacuees. An official memorandum sets forth his duties as follows:

1. To survey the hospitals throughout the State (excluding those in the exposed cities) to determine how many beds can be put into immediate use in emergency with existing kitchen, laundry, sanitation and other engineering facilities,
   (a) by clearing patients to their homes
   (b) by restricting admissions
   (c) by use of rooms not normally used for patients
   (d) by rehousing medical and nursing staff and other hospital personnel outside the hospital
   (e) by use of neighboring buildings (schools, hotels, etc.) for patients (or staff)
   (f) by extra bed accommodation in temporary structures erected on available grounds adjacent to the hospital.
2. To assist in designating for each casualty hospital or group of hospitals in each exposed city,
   (a) the line of evacuation to the base
   (b) the transport arrangements
   (c) the emergency base hospitals provisionally allotted to each casualty unit.
3. To keep constantly informed of the bed state of every hospital in his area by weekly returns.
4. To advise the Office of Civilian Defense, through the Regional Medical Officer, on the need for providing additional accommodations, e.g., by temporary construction or by converting convalescent homes, hotels, school dormitories or other structures into hospitals.
5. To report to the Regional Medical Officer of the Office of Civilian Defense any exceptional conditions requiring action (e.g., beyond state boundaries, or required by the needs of the military situation) and to forward to him copies of a monthly summary report on the State's emergency hospital program. Where a hospital outside a State boundary is readily accessible for the reception of casualties from an exposed city, this fact should also be noted.
6. To maintain constant touch with the other service departments of the State Defense Council (e.g., evacuation, etc.).
7. To supervise the distribution of medical and hospital supplies under the direction of the State Civilian Defense Property Officer and report any threatened deficiency to the Regional Medical Officer.
8. To supervise staff arrangements for emergency base hospitals and for reception areas.
9. To control movements of medical and nursing staff, as well as of casualties in any situation affecting emergency base hospitals.

The hospital officer must work in close collaboration with the state evacuation authority, the memorandum points out. In addition, he may find it necessary to collaborate with the state officer in charge of institutions for the care of mental patients, if such hospitals are to be used as emergency base hospitals for the reception of casualties and other patients evacuated from urban hospitals. Transport arrangements are to be handled in collaboration with the evacuation authorities of the state and the military authorities of the area.

HOSPITALS CARE FOR CIVILIAN CASUALTIES

Payment for temporary hospitalization of civilians injured as the result of enemy action has been made possible by a recent agreement between Administrator Paul V. McNutt of the Federal Security Agency and Director James M. Landis of the Office of Civilian Defense. The funds have been allocated to the U. S. Public Health Service by the Federal Security Administrator from funds made available to him from the President's emergency fund. A joint memorandum embodying the details of the program has been issued by Surgeon General Thomas Parran of the U. S. Public Health Service and Dr. George Baehr, Chief Medical Officer of the Office of Civilian Defense.

The plan provides that all hospitals caring for civilian casualties in the event of air raids or other enemy action will be reimbursed by the Federal Government at a rate of $3.75 a day. This is the rate of reimbursement established by the Federal Board of Hospitalization for Federal beneficiaries in government hospitals and may be changed as conditions require, it was stated.

Any hospital in the nation, voluntary or governmental, may be used as a casualty receiving hospital in the Emergency Medical Service established by the Medical Division of the Office of Civilian Defense. In addition, certain hospitals and other institutions in "safe areas" may be used as emergency base hospitals for casualties or other patients whom it may be necessary to evacuate from urban hospitals in exposed areas. The new agreement provides that Federally owned equipment may be loaned to the base hospitals and that their staffs will be supplemented by physicians of the region who will be commissioned in the reserve corps of the U. S. Public Health Service. It was emphasized that management and control of all hospitals, both local casualty receiving hospitals and emergency base hospitals, will remain the responsibility of the local or state authorities.

In the establishment of emergency base hospitals, emphasis will be placed on the relative safety of the area and the availability of existing hospitals and other institutions. Hospitals are now being surveyed for this purpose and will be classified on a basis of size, equipment and standards of operation.

It is proposed to begin immediately the organization of medical staffs for future base hospitals as hospital units affiliated with casualty hospitals similar to the affiliated general hospitals of the Army. The physicians, surgeons, specialists and dentists who are to be commissioned in the Public Health Service Reserve for service in these hospitals will receive rank, pay and allowance equivalent to those of the Medical Corps of the U. S. Army. They will be selected from older age groups, from physicians with disabilities that make them ineligible for military service and from women physicians. As far as possible, they will be assigned to service in the regions in which they live. Because they are to function as balanced professional staffs, they will be recruited from the staffs of civilian hospitals and cleared through the Procurement and Assignment Service.

Regional Medical Officers of O. C. D., who are appointed in the Public Health Service, will be the regional representatives of both agencies for this program. State Chiefs of Emergency Medical Service or their deputies may also be appointed consultants or commissioned in the Public Health Service in order that they may act as state representatives for the two agencies in the organization of emergency hospital facilities and the reimbursement of hospitals for the care of civilian casualties. In the more populous coastal states a full time State Hospital Officer may be needed, who will also be eligible for appointment in the Public Health Service.

PLAN TO ESTABLISH BLOOD BANKS

Hospitals in communities exposed to war hazards may receive assistance in the establishment of a blood and plasma bank through funds available to the United States Public Health Service, which will be administered by it through the Medical Division of the United States Office of Civilian Defense. In addition to providing whole blood or liquid plasma for the current needs of hospitals, these blood banks as well as others already in operation are to accumulate a reserve supply of plasma for civilian casualties caused by enemy action. Technical and bacteriologic safeguards are to be observed as recommended by the Subcommittee on Blood Substitutes, Division of Medical Sciences of the National Research Council. At the request of the Office of Civilian Defense, a technical handbook on blood and plasma banks has been prepared by this committee, which will be distributed by the Office of Civilian Defense to hospitals.

Following the advice of the committee of the National Research Council, financial and technical assistance will be provided to only 300 hospitals of 200 or more beds approved by the American College of Surgeons and the Hospital Register of the American Medical Association. These hospitals will agree to maintain required technical standards and to accumulate a surplus of liquid or frozen plasma amounting to one unit per bed within three months. Grants will be made only for the purchase of essential equipment if obtainable locally and for sufficient technical assistance to initiate the project. Hospitals will thereafter be expected to continue to maintain the blood and plasma bank to meet their daily needs as well as the plasma reserve for civilian casualties.

Technical guidance has also been made available through the appointment of Dr. John B. Alsever of Syracuse, N. Y., by the Surgeon General of the U. S. Public Health Service and his assignment to the Medical Division of the Office of Civilian Defense as Technical Director of its Blood and Plasma Service. Dr. Alsever will be assisted by Regional Technical Consultants in various parts of the country whose consulting services will be made available to hospitals in their area.

As a further safeguard for the civilian population, the United States Public Health Service is providing for the production of 50,000 units of dried plasma or human albumin in laboratories approved for the manufacture of biologic products by the National Institute of Health. The American Red Cross has agreed to collect the blood for this purpose without interference with its blood collecting services for the armed forces. This second reserve of dried plasma will be distributed to Office of Civilian Defense depots located in various parts of the country. It will be made available by the Medical Division of the Office of Civilian Defense to stricken communities for their casualties whenever their own local stores of liquid or frozen plasma are in danger of being depleted.

COMMISSIONING OF NATIONAL NAVAL MEDICAL CENTER

The National Naval Medical Center located about one mile from Bethesda, Maryland, on the Rockville Pike, was commissioned February 5, 1942, when Rear Admiral Charles M. Oman, Medical Corps, U. S. Navy, formally took command of the Center.

At 11 a.m. the flag above the Naval Medical Center at Twenty-Third and E Streets, N. W., Washington, D. C., was lowered, the Stars and Stripes were hoisted at the new, modern center, and the buglers sounded colors. Personnel of the Center gathered in front of the Administration Building, and Admiral Oman read his orders from the Secretary of the Navy detaching him from duty as Commanding Officer of the old Naval Medical Center, and assigning him to the post of Commanding Officer, National Naval Medical Center.

The new Center is situated in a rolling, partly wooded, 247-acre reservation. Ground for the institution was broken June 29, 1939, and the cornerstone was laid Armistice Day, 1940 by the President of the United States in the presence of the Secretary of the Navy and his staff.

The buildings, with the exception of the officers' quarters, are of structural steel with exterior of precast, exposed aggregate panels. At a distance, the dark, serpentine spandrels, vertically situated between the windows, serve to give the main building the appearance of having lofty square columns. The style is monumental, and its balanced beauty gives the observer a sense of quietness and repose.

The tower of the administration building, which is set on a hill facing the Rockville Pike, dominates the landscape for many miles in all directions. This tower, which will be devoted to wards and individual sickrooms, is twenty stories high, and rises to a height of 558 feet above sea level, and 270

Official U. S. Navy photograph

Main Entrance
National Naval Medical Center

feet above the Rockville Pike. The tower floors are in the shape of a Geneva cross, the greatest length being approximately 106 feet.

The Medical Center consists of a central group of buildings, which includes administration offices, laboratories, classrooms, a surgical pavilion, two ward buildings, ship's service, commissary, and recreation facilities, including a "movie" theater seating six hundred. All these facilities may be said to be under one roof as they are all intercommunicating, either directly or by matching corridor buildings. Separated from the main Medical Center group are the hospital corps quarters, the nurses' quarters, five sets of officers' quarters, garage and laundry, and a power and refrigerating building.

The Naval Medical Center will include the Naval Hospital, Naval Medical School, Naval Dispensary and Naval Dental School.

Equipment of the latest design will be provided for fever therapy, physical therapy, pathology, surgery, internal medicine, X-ray, eye, nose and throat, urology, neuropsychiatry, and other services. The hospital will utilize the services of the clinical laboratories of the Naval Medical School.

The Naval Medical School will conduct postgraduate courses for medical officers to train them in phases of medicine peculiar to the naval service, such as field hygiene related to service with the Marines, submarine hygiene and physiologic problems related to deep sea diving, aviation medicine and tropical diseases. The training courses conducted by the Naval Medical School for hospital corpsmen of the Navy will include those for X-ray, chemistry, pharmacy, clinical laboratory, epidemiologic and blood plasma technicians. The staff of the Medical School will include bacteriologists, serologists, hematologists, parasitologists, entomologists, pathologists, pharmacists, and other specialists necessary to conduct the school and the routine and research work of the laboratories. In addition, the teaching staff will include specialists in surgery and the various branches of medicine.

The Medical Center will have a medical library large enough to accommodate 70,000 volumes, and a "crew's" library for the general use and recreation of patients and staff. Special attention has been paid to the decoration and furnishing of these spaces in order to provide surroundings in harmony with the general architectural features of the building.

Special facilities will be provided for research, including a special research building. Most of the projects presented will be of a physiologic nature. Special attention will be given to epidemiology and to the effects of increased and decreased air pressure having a direct relation to the depth to which divers may descend, and the heights to which aviators may climb. A combination high and low air pressure chamber will be provided, capable of holding several men at one time. It will be possible quickly to obtain any desired temperature from summer heat to sub-zero, and also to change rapidly from several atmospheres of pressure to pressure below the usual prevailing atmospheric. This will enable the medical officers to observe combined effects of variations in temperature and pressure.

The Naval Dental School occupies two floors of the North Wing. It will be furnished with the latest equipment for surgical and prosthetic dental procedures. Class rooms and laboratories are provided for postgraduate instruction of naval dental officers and for the training of naval hospital corpsmen as general and prosthetic dental technicians. The dental school will serve the hospital and the naval personnel in the vicinity of Washington.

The Naval Medical Center, as it approaches completion, shows itself to be ideally suited, architecturally, functionally, and in its tranquil surroundings, for the care of the sick, for instruction, and for medical research.

The President has taken an active part in directing the planning of the Naval Medical Center from its inception. The project is under the direction of Rear Admiral Ross T. McIntire, Medical Corps, U. S. Navy, and Rear Admiral Ben Moreel, Civil Engineer Corps, U. S. Navy, Chief of the Bureau of Yards and Docks. Commander Hugo C. Fischer, Civil Engineer Corps, U. S. Navy was in charge of the construction.

The grounds will be landscaped, and as far as possible the natural contours will be preserved and the general effect of a natural rolling forested area maintained. The trees surrounding the buildings include oaks, red maples, sycamores, and such native flowering shrubs as dogwood. A stream, which flows in front of the building, will be utilized in adorning the grounds and a small waterfall has been created in it.

NETWORK BROADCASTS CONCLUDED

The last broadcast of the National Defense Health Clinics was presented by the Medical Society's Committee on Radio Education on March 29. Throughout the series Dr. Henry B. Gwynn, Chairman of the Committee, has been moderator. He has brought the broadcasts, which were of the round table type, to a high degree of excellence.

The following are the broadcasts which have not been previously listed in the MEDICAL ANNALS.

February 15 "Health and Production"
  Dr. Victor Heiser, Author of "An American Doctor's Odyssey"
  Mr. H. E. Humphreys, Jr., Vice President, United States Rubber Company
  Mr. Ralph Hetzel, Director of Unemployment, Congress of Industrial Organization
February 22 "The Red Cross's Contribution to the Nation's Health"
  Hon. Daniel Bell, Under Secretary of the Treasury
  Miss Mabel Boardman, Secretary, American Red Cross
  Dr. Albert McCown, Medical Director, American Red Cross
March 1 "Doctors at the Nation's Service"
  Brig. Gen. Lewis B. Hershey, Director, Selective Service System
  Lt. Col. Sam F. Seeley, Executive Officer, Procurement and Assignment Service of Physicians, Dentists and Veterinarians
March 8 "Food for Freedom"
  Hon. Claude Wickard, Secretary of Agriculture
  Mr. Thomas Campbell, former Agricultural Adviser to the Soviet Government
  Dr. Frank G. Boudreau, Executive Director, Milbank Memorial Fund
March 15 "Women at War Work"
  Miss Carmel Snow, Editor-in-Chief, Harpers Bazaar
  Dr. Victor Heiser, author and consultant on industrial health problems
  Mrs. Henry S. Ingraham, President, Y. W. C. A.
March 22 "After the War—What?"
  Mr. Charles W. Eliot, Director, National Resources Planning Board
  Dr. Warren F. Draper, Assistant Surgeon General, United States Public Health Service
  Dr. Elmer Kayser, Dean of University Students, George Washington University
March 29 "We Must Win the War"
  The Honorable Walter Nash, Minister from New Zealand to the United States

Dr. Gwynn has received communications from the Mutual Broadcasting Company highly praising the programs presented under his direction. Plans are being considered for their resumption in the fall.

MEETINGS

Wednesday, April 29

PROCUREMENT AND ASSIGNMENT SERVICE NIGHT

"The Physician's Role in the War." LT. COL. SAM F. SEELEY, Executive Officer, Procurement and Assignment Service of Physicians, Dentists and Veterinarians

Buffet Supper

Wednesday, May 6

ANNUAL BUSINESS MEETING

Election of officers; annual reports of the President, the Chairman of the Executive Board and the Secretary; review of activities of the Society, its boards, sections and committees.

Wednesday, May 13

"The Endocrine Approach to the Problem of Carcinoma of the Prostate with Observations from the Clinical Aspect of the Effect of Castration and Administration of Diethylstilbestrol and Estradiol Dipropinate," illustrated with lantern slides. WILLIAM P. HERBST, M.D., F.A.C.S., Professor of Clinical Urology, Georgetown University School of Medicine. Discussion will be led by TOMAS CAJIGAS, M.D., F.A.C.P., LT. COL. JAME E. ASH, M.C., U.S.A., Instructor in Pathology, Army Medical School, and CARL VOEGTLIN, M.D., Chief, National Cancer Institute.

MEMBERSHIP

The following applicants for membership were duly elected to membership at the business meeting, April 8, 1942:

Active Members

Edmund Francis Daley, 1801 Eye Street, N. W.
Winfred Overholser, St. Elizabeths Hospital
George C. Ruhland, District Building
Edward J. Stieglitz, 1726 Eye Street, N. W.

Associate Members

Brooks G. Brown, Jr., 1507 East-West Highway, Silver Spring, Md.
Alfred Golden, 4812 New Hampshire Avenue, N. W.

The following applicants for membership will be voted on at the business session, October 14, 1942:

For Active Membership

William M. Clopton, University of Virginia—1935
Robert E. Henderson, Hahnemann Medical College—1917
Henry H. Lichtenberg, College of Physicians and Surgeons, Columbia University—1927

NEWS AND PERSONALS

President Roosevelt in accordance with the Congressional resolution of May 18, 1928, has proclaimed May 1 as **Child Health Day.** In making this proclamation the President states:

"Now, therefore, I, Franklin D. Roosevelt, President of the United States of America, in recognition of the vital importance of the health of children to the strength of the Nation, do hereby designate the first day of May of this year as Child Health Day.

"And I call upon the people in each of our communities to contribute to the conservation of child health and the reduction of illness among children by exerting every effort to the end that before May Day, Child Health Day, children over nine months of age be immunized against diphtheria and smallpox, the two diseases for which we have the surest means of prevention."

J. B. Lippincott Company of Philadelphia, publisher of the *Annals of Surgery*, announces that beginning with the June issue the Guillermo Kraft Company, an old established publishing firm of Buenos Aires, will translate the *Annals* in Spanish each month for South American physicians and surgeons. In making this announcement, the Lippincott Company states:

"The medical profession in this country has become increasingly aware of its obligations and responsibilities in South America. No better symbolic demonstration can be given of its sincere willingness to develop permanent intellectual fraternization between the surgeons of the two continents."

The Section on Neurology and Psychiatry, which met April 9 at the Society's building, presented the following program: "A Role for the Psychiatrist," Dr. William J. Mallory, Professor Emeritus of Medicine, George Washington University School of Medicine; "The Functions of a Neuropsychiatrist in a Military General Hospital," Lt. Col. William C.

Porter, U.S.A., Walter Reed General Hospital; "The Place of Mental Hygiene in Public Health," Dr. Paul V. Lemkau, Walter Reed General Hospital.

The Section on Pediatrics held a round table discussion on "Eczema in Infancy and Childhood," at the Medical Society's building, March 26. Dr. William A. Howard acted as Chairman. The following papers were read: "The Experimental Sensitization of Skin," Dr. Arthur Stull, Roosevelt Hospital, New York; "The Allergist's Approach to Eczema," Capt. William B. Sherman, M.C., U.S.A., Fort Meade, Md.; "Topical Treatment of Eczema," Dr. Frank J. Eichenlaub.

The Medical Society of St. Elizabeths Hospital held its Fifth Annual Meeting, April 18, 1942. Members of the Society were guests of Dr. and Mrs. Winfred Overholser at a luncheon immediately following the business meeting and election of officers. Dr. Jay L. Hoffman presided at the scientific session in the afternoon, when the following program was presented: "Psychoanalytical Concepts of Manic Depressive Psychosis," Dr. Lucille Dooley; "The Influence of Psychoanalysis on Modern Literature," Dr. N. Bryllion Fagin, Director of the Playshop, Johns Hopkins University; "Acute Traumatic Neuroses Following Combat," Comdr. Uno H. Helgesson, U.S.N.R.; Comments by Dr. Overholser, Superintendent of St. Elizabeths Hospital.

The meeting closed with the Annual Dinner at the Mayflower Hotel. Dr. Elmer Louis Kayser, Dean of University Students, George Washington University, was the principal speaker.

The George Washington University Medical Society held its sixth meeting of the year, March 21, at 1335 H Street, N.W. Lt. Comdr. Albert S. Hyman, U.S.N.R., U. S. Naval Hospital, New York, spoke on "The First Casualties of the War; the Cardiovascular Toll." His paper was discussed by Drs. Thomas S. Lee and Walter A. Bloedorn.

The Smith-Reed-Russell lecturer, Dr. John C. Whitehorn, Psychiatrist-in-Chief, Johns Hopkins Hospital, and Professor of Psychiatry, Johns Hopkins University School of Medicine, gave an address on "Psychiatry as a Basic Medical Science" at the George Washington University School of Medicine, April 15.

At a meeting of the **Medical Arts Society** at the Kennedy-Warren Hotel, March 12, Dr. M. W. Glover presented a paper on "Pregnancy Complicated with Pulmonary Tuberculosis." Dr. Russell J. Fields illustrated his subject, "Common Skin Diseases" with kodachrome slides.

The George M. Kober Medical Society met at the Columbia Country Club, March 16. Dr. William P. Herbst presented a paper entitled, "The Dynamics of the Upper Urinary Tract." Dr. Clayton B. Ethridge gave a case report.

The Washington Ophthalmological Society held its third regular meeting of the year at the Episcopal Eye, Ear and Throat Hospital, March 2. The following program was presented: "Retinal Rest Periods," Dr. Sterling Bockoven; "Clinical Pathology of the Cornea," Dr. Benjamin Rones; "Color Slides of Anterior Eye Diseases," Dr. Richard Wilkinson.

The Georgetown Medical Alumni Association met at the Georgetown Medical School, March 23, to hear Dr. John J. Moorhead discuss "Casualties at Pearl Harbor." Dr. Moorhead was at Pearl Harbor at the time of the Japanese attack.

The District of Columbia Tuberculosis Association convened for its Annual Meeting on March 25 in the auditorium of the New Department of Interior Building. Dr. Herman E. Hilleboe, P. A. Surgeon-in-charge, Tuberculosis Control, States Relations Division, United States Public Health Service, discussed methods of preventing the rise in the tuberculosis rate during the war period. Dr. Harold H. Lund, Executive Secretary of the Association, reported that $68,973 had been obtained to date from the sale of 1941 Christmas Seals, an increase of $11,000 over any previous annual total.

Among those elected members of the Board of Directors were the following members of the Medical Society: Dr. Harry S. Bernton, Dr. C. Willard Camalier, Dr. H. J. Crosson, Dr. James G. Cumming, Dr. Edgar W. Davis, Dr. Watson W. Eldridge and Dr. J. Winthrop Peabody.

The Public Health Committee of the Washington Board of Trade, of which Dr. Roy Lyman Sexton is Chairman, held a meeting on March 23. A report was submitted by Mr. O. K. Fike, Chairman of the Subcommittee on Hospital Facilities, on the proposed hospital expansion program. Dr. Darrell C. Crain, Chairman of the Subcommittee on Coöperation with the Medical Society, reported on the status of the Medical Society's Periodic Health Examination Program. The Program was endorsed unanimously by the Public Health Committee.

The State and Provincial Health Authorities of North America and the State and Territorial Public Health Officers held their Annual Conferences in the Medical Society's building, March 23–26.

The Conference of State and Provincial Health Authorities of North America opened March 23 with an address by the President, Dr. Frederick W. Jackson. "Public Health Responsibilities in the World War" was discussed by Drs. Hugh S. Cumming, Pan American Sanitary Bureau; Dr. Robert E. Wodehouse, Canadian Department of Pensions and National Health; Surgeon General Thomas Parran, United States Public Health Service; Dr. Martha Eliot, Children's Bureau, U. S. Department of Labor; and Dr. John A. Ferrell, International Health Division, Rockefeller Foundation. Other speakers were Col. P. G. Bell, Royal Canadian Army Medical Corps, and Flight Lt. I. M. Cleghorn, District Hygiene Officer of the Royal Canadian Air Force.

The 40th Annual Conference of the United States Public Health Service for the State and Territorial Health Officers was held on March 25 and 26. Surgeon General Thomas Parran of the United States Public Health Service opened the Conference. Hon. Paul V. McNutt, Administrator, Federal Security Agency, spoke on "Health Agencies, Their Responsibilities and Their Opportunities during the Present Crisis." Among the papers read were the following: "Status of Legislation and Appropriations," Dr. E. R. Coffey, Assistant Surgeon General, U. S. P. H. S.; "Role of State and Local Health Officers in Emergency Medical Service," Dr. George Baehr, Chief Medical Officer, Office of Civilian Defense; "Are We Meeting the Crisis?," Dr. J. W. Mountin, Assistant Surgeon General, U. S. P. H. S.; "Procurement and Assignment of Physicians, Dentists, and Veterinarians," Lt. Col. Sam F. Seeley, Executive Director, Procurement and Assignment Service, Federal Security Agency; "The United States Public Health Service Reserve," Dr. Warren F. Draper, Assistant to the Surgeon General, U. S. P. H. S.

The National Conference of Governmental Industrial Hygienists was held in Washington, April 9–11, in the auditorium of the Social Security building. The Conference, which is sponsored by the United States Public Health Service, was attended by industrial hygienists from the National Institute of Health and 36 states. The group met in joint session with the Subcommittee on Industrial Health and Medicine of the Health and Medical Committee of the Office of Defense Health and Welfare Services.

Dr. Wallace M. Yater left Washington, April 18, to give a series of lectures in the West and Middle West. He will address the 26th Annual Session of the American College of Surgeons at St. Paul, April 21, on the subject, "Ten Years' Experience with Thorotrast Hepatosplenography." On April 22 he will conduct a clinic at the Ancker Hospital on "Differential Diagnosis of Jaundice."

Dr. Yater has been selected to deliver the 1942 Mayo Foundation Lecture before the permanent staff of the Mayo Clinic and the Fellows of the Mayo Foundation at Rochester, Minnesota, April 23. The subject of his lecture will be "Historical and Present-Day Concepts of Cardiac Conduction Disturbances."

On Sunday, May 3, he will address the California Heart Association at Del Monte, California, on "Past and Present-Day Concepts of Cardiac Conduction Disturbances." The following two days he will appear before the California State Medical Society to make the following talks: May 4, "The Medical Aspects of Peripheral Vascular Disease," and May 5, "Heart Disease Amenable to Surgery." On the latter date he will also participate in a clinicopathologic conference.

Dr. William P. Herbst addressed a joint meeting of the Albemarle County Medical Society and the Virginia Urological Society at Charlottesville, Virginia, March 5, on "The Bio-Chemistry of Tissue Specificity as Related to Endocrine Imbalance, with Clinical Observation on the Effect of the Administration of Endocrine Substances and Castration upon Benign and Malignant Prostatic Tissue."

Dr. Hugh S. Cumming, former Surgeon General of the United States Public Health Service, entertained March 12 at the Shoreham Hotel in honor of a group of distinguished Chilean physicians, who are making a tour of various medical and scientific institutions in New York, New Haven, Boston, Philadelphia and Baltimore. The tour is under the auspices of the Pan American Sanitary Bureau, of which Dr. Cumming is Director, and of the Coordinator of Inter-American Affairs, Nelson Rockefeller.

Dr. Edward J. Stieglitz addressed the American College of Physicians at its 26th Annual Session, St. Paul, Minnesota, April 23, on the subject, "Pertinent Problems in Geriatric Medicine." He also participated in a panel discussion on "Geriatrics—the Medical Problem of our Advancing Age Group."

Dr. Leon S. Gordon was appointed a member of the Medical Committee of the Metropolitan Police Boys' Club, March 7.

CORRESPONDENCE

WASHINGTON, D. C., March 20, 1942

MR. THEODORE WIPRUD
SECRETARY, MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA
WASHINGTON, D. C.

DEAR MR. WIPRUD:

This will acknowledge receipt of a copy of the February issue of the Medical Annals of the District of Columbia. The report of the cost study of rehabilitation of Selective Service registrants in the District of Columbia by your Society and others, is an outstanding contribution to our efforts in this work.

Please accept the sincere appreciation of this Headquarters.

For the Director:
CARLTON S. DARGUSCH
Colonel, JAGD
Deputy Director, Selective Service System

BOOKS RECEIVED FOR REVEIW

Acknowledgment is made of the following books which have recently been received for review:

Nephritis. Leopold Lichtwitz, M.D., Chief of the Medical Division of the Montefiore Hospital; Clinical Professor of Medicine, Columbia University, New York. Pp. 328, with 120 illustrations and tables. Price, cloth, $5.50. New York: Grune & Stratton, 1942.

A Primer on the Prevention of Deformity in Childhood. Richard Beverly Raney, B.A., M.D., Associate in Orthopaedic Surgery, Duke University School of Medicine, Durham; Attending Orthopaedic Surgeon, Watts Hospital, Durham; in collaboration with Alfred Rives Shands, Jr., B.A., M.D., Medical Director, Alfred I. duPont Institute of The Nemours Foundation, Wilmington, Del.; Visiting Professor of Orthopaedic Surgery, University of Pennsylvania School of Medicine, Philadelphia. Pp. 188, with 88 illustrations. Price, cloth, $1.00. Elyria, Ohio: National Society for Crippled Children, 1941.

Sex Hormone Therapy, in three volumes. Bloomfield, N. J.: The Medical Research Division, Schering Corporation, 1941 and 1942.

Liquor the Servant of Man. Walton Hall Smith and Ferdinand C. Helwig, M.D. Pp. 273. Price, cloth, $2.00. Boston: Little, 1940.

BOOK REVIEWS

Synopsis of Allergy. HARRY L. ALEXANDER, A.B., M.D., Professor of Clinical Medicine, Washington University School of Medicine; Editor of The Journal of Allergy. Pp. 246, with 22 illustrations. Price, cloth, $3.00. St. Louis: Mosby, 1941.

This is a clear, easily understandable presentation of the subject of allergy in terms of present day thought. It is necessarily brief but fairly complete. Every clinical expression of human hypersensitiveness is arranged and classified. The more common aspects of allergy are more thoroughly discussed. The most generally accepted viewpoints are given, and where there is disagreement, the author's interpretation is stated.

Many instructive tables are included. One which gives the differential diagnosis of contact dermatitis, atopic dermatitis, allergic fungus dermatitis, and seborrheic dermatitis, and another which contrasts the symptoms of drug intolerance with those of drug allergy are of particular value.

The author fully considers the subject of intrinsic atopy which comprises 20 per cent or more of the asthmatic cases, about the same number of cases of vasomotor rhinitis, and the great majority of patients with chronic urticaria.

The appendix includes a list of household materials and the possible allergens they contain, the preparation of atopens, diagnostic methods, recipes for elimination diets, and ragweed pollen distribution. This makes this excellently written book of value not only as an introduction to the subject of allergy but also as a reference work.

E. A.

The 1941 Year Book of Public Health. Edited by J. C. Geiger M.D., Dr. P.H., Director of Public Health, City and County of San Francisco; Clinical Professor of Epidemiology, University of California; Clinical Professor of Preventive Medicine and Public Health, Stanford University School of Medicine. Pp. 544. Price, cloth, $3.00. Chicago: Year Book Publishers, 1941.

The Year Book of Public Health fills an important need for summaries of helpful articles on the subject of epidemiology and public health, in which the views of the individual contributors are fully maintained in concise and usable form. The editor's comments at the end of most articles are of high quality and scientific value. The reader is left with the feeling that, whatever might have been his reaction after reading each article, he is helped by the frank comments of one who is in a position to speak out of many years of administrative experience in the field of preventive medicine and medical care.

In sequence the articles cover important contributions in public health administration, medical care, child hygiene, communicable diseases and epidemiology, dental hygiene, food and milk, health education, hospital hygiene, industrial hygiene, laboratory, maternal care, mental hygiene, military hygiene, nursing, nutrition, and statistics.

The Year Book will serve as an important yearly reference guide for the busy public health worker and will also keep the practicing physician informed of newer contributions to preventive medicine, a field in which he is vitally concerned.

D. L. S.

Shock Treatment in Psychiatry: A Manual. Lucie Jessner, M.D., Ph.D., Resident Psychiatrist, Baldpate, Georgetown, Mass.; Graduate Assistant in Psychiatry, Massachusetts General Hospital; Assistant in Psychiatry, Beth Israel Hospital, Boston; and V. Gerard Ryan, M.D., Associate Psychiatrist, Elmcrest Manor, Portland, Conn.; Assistant in Psychiatry, Harvard Medical School. Pp. 149. New York: Grune & Stratton, 1941.

This small book on shock therapy is especially valuable at this time because, even though it is a manual, it brings up to date a large volume of very recent work. The book is concise, and gives clear and exact directions concerning the use of the various shock treatments. It serves as a bridge between current literature and the larger and formal textbooks. The book follows the chronology of shock treatment and is therefore divided into sections applying to insulin, metrazol and electricity.

The section devoted to insulin is the largest because the treatment has been in use the longest, the technic is the most complex, and the results can be evaluated on the basis of the study of a large number of cases after the passage of sufficient time to insure valid conclusions. The details of the standard treatment are given in detail, and some of the modifications are described. Indications, contraindictions, complications, and prognostic criteria are described and discussed. There is an extensive exposition on the changes occurring in various organs during the treatment. The evaluation of results is thorough.

The section on metrazol explains the details of treatment, including modifications. The convulsion is described and the complications discussed. For obviating some of the complications, the efficacy of curare and beta-erythroidin hydrochloride is pointed out.

The section on electric convulsive therapy is quite brief because of the short period of time this method has been in use. The authors give details of the various types of apparatus, present the theories of operation, describe the technic, and conclude with a short comment.

On the whole, the manual is intended primarily for the guidance of the specialist in psychiatry, but the presentation is sufficiently clear and simple so that the nonpsychiatrist can utilize the methods described if facilities are available. The bibliography, which includes 353 references, is well arranged and quite complete. These references are well integrated into the text.

I. R.

REPRINTS RECEIVED

The following reprints have recently been received for which due acknowledgment is made:

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"The Selective Service System and the Practice of Medicine." Major Robert A. Bier, M.C., U.S.A. Journal-Lancet, January 1942.

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(*Continued from page 147*)

suggestive findings of infarction were present although they were carefully searched for in view of the roentgenkymographic interpretation.

Roentgenograms revealed marked enlargement of the cardiac shadow in all diameters with preponderance of the left ventricular contour. There was concomitant left auricular enlargement as evidenced by the displacement of the left main bronchus upward and retrodisplacement of the barium filled esophagus. Marked congestive changes were noted in both pulmonary fields. The bullet was demonstrated only on an overexposed film and was located in the posterior wall of the left ventricle (figs. 1 and 2).

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DISEASES OF THE PANCREAS*

II. The Chronic Diseases

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CHRONIC lesions of the pancreas may impair the function of the gland in one of two ways, (1) by producing sufficient destruction of the islands of Langerhans to result in the development of diabetes mellitus, and (2) by interfering with the production or flow of pancreatic juice in such a way as to eventuate in a chain of physiologic disturbances which I will refer to as chronic pancreatic insufficiency. A general consideration of the latter syndrome will be followed by a discussion of the various chronic lesions that may involve the pancreas. Pancreatic diabetes is not included in the scope of this paper.

CHRONIC PANCREATIC INSUFFICIENCY

Until recently, chronic impairment of the function of the pancreas had been regarded as a nebulous disease, enshrouded in a haze of ignorance. In textbooks scant attention is paid this condition, and it is briefly dismissed with a few vague remarks concerning the associated loss of abnormal amounts of fat and protein in the feces.

Etiology and Pathogenesis.—In 1856 Claude Bernard[1] demonstrated that obstruction of the pancreatic ducts resulted in an abnormal loss of all foodstuffs in the feces. However, his conclusion that this loss of foodstuff depended solely on the absence of pancreatic enzymes in the intestinal tract was refuted by much experimental evidence. Contemporary investigators found that in experimental animals the loss of food in the feces was materially greater after total pancreatectomy than after ligation of the pancreatic ducts,[2, 3] a finding inconsistent with Bernard's views. Abelman[4] attributed this to the fact that the pancreatic enzymes from the obstructed pancreas reached the intestine via the bloodstream, whereas Lombroso[5] was of the opinion that the pancreas elaborates a hormone which is concerned with the digestion of food and which continues to be formed after ligation of the ducts.

Current workers in the field of pancreatic physiology have contributed brilliantly to our understanding of the workings of this complex organ. It had been generally known that in spite of control of the diabetes in a totally depancreatized dog the animal invariably died in several months as the result of a fatty condition of the liver, the fat content of which reached as much as 50 per cent, dry weight. Subsequently it was demonstrated that the feeding of raw beef pancreas prevented this lethal complication,[6] and later it was found that choline possessed this same property.[7] Finally, the answer to this puzzling riddle was found by Dragstedt and his co-workers,[8] who succeeded in isolating from raw beef pancreas a fat-metabolizing hormone, "lipocaic," the fatty-liver-preventing power of which far exceeded that of its choline content. Clinical application of the use of this hormone in the treatment of hepatomegaly associated with diabetes and with atrophy of the pancreas has led to striking results.[9, 10, 11] These experimental and clinical findings have clearly established the fact that chronic disease of the pancreas is associated with diminution or complete absence of a hormone, a lack of which prevents the proper metabolism of fat by the liver, permitting an abnormal deposition of fat in that organ.

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* Abridgment of Part II of the Davidson Lecture, delivered before the Society, October 8, 1941. Part I appeared in the April, 1942 issue of the ANNALS.

Following total removal of the pancreas in experimental animals, the blood fat level is promptly and permanently decreased. While investigating this phenomenon, Kaplan and Chaikoff[12] isolated from raw beef pancreas a heat-labile hormone, distinct from the heat-stabile hormone of Dragstedt, which causes an elevation of the blood fats to and above the normal level in depancreatized animals. The clinical value of this substance has yet to be determined.

Original Investigations in Chronic Pancreatic Insufficiency.—These investigations were commenced in order to determine exactly the influence of chronic pancreatic insufficiency on the utilization of fat, protein and carbohydrates. This was accomplished by carrying out metabolism experiments on dogs in which the fecal loss of these foodstuffs was determined under varied dietary conditions. Normal animals exhibited a highly efficient and inexhaustible capacity to utilize both limited and liberal amounts of fat, protein and carbohydrates.[13] These same animals were then subjected to total removal of the pancreas, following which the experimental diabetes was controlled with insulin. When placed on the same diets, it was found that immediately most of the ingested fat and protein was lost in the feces (fig. 1). The carbohydrate loss was less pronounced. In another series of animals, the pancreatic ducts were completely evulsed, a procedure designed to eliminate all possibility of reëstablishment of the continuity of the ducts. Following this operation, which prevented the secretion of pancreatic juice into the intestine just as completely as did total removal of the pancreas, the fecal loss of foodstuffs, and particularly fat, was only slightly increased.[14] Only after a period of 3 to 6 weeks did the maximal loss of fat, comparable to that following pancreatectomy, develop (fig. 2). The assumption that this temporary maintenance of fat-utilization after evulsion of the ducts was the result of absorption of lipase from the obstructed pan-

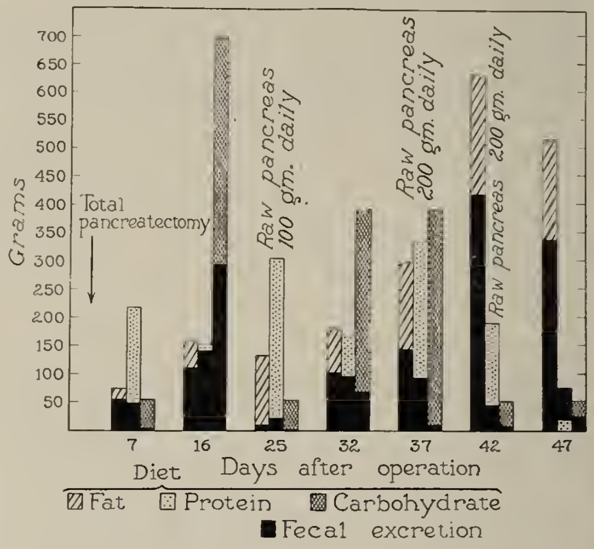


FIG. 1. Metabolic experiments on a totally depancreatized dog, demonstrating the immediate impairment of fat utilization and the beneficial influence of raw pancreas.

creas was altered as the result of a crucial experiment.

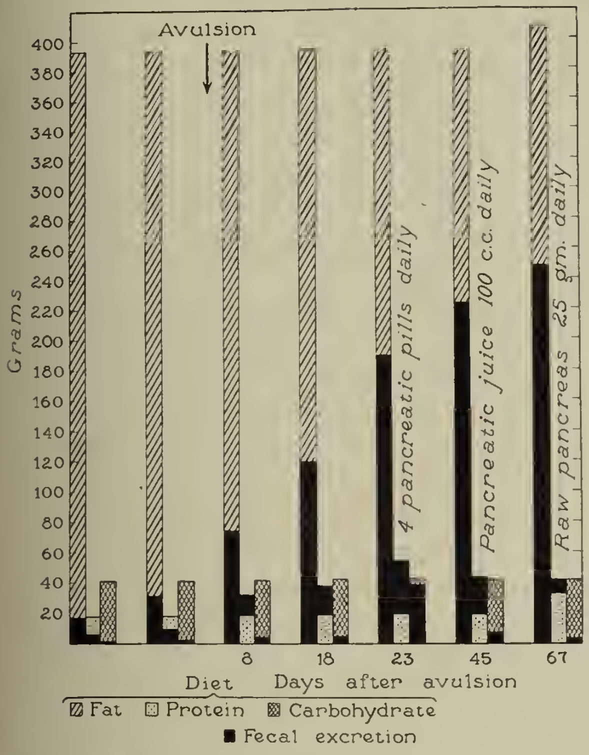


FIG. 2. Metabolic experiments demonstrating the gradual impairment of fat utilization after evulsion of a dog's pancreatic ducts.

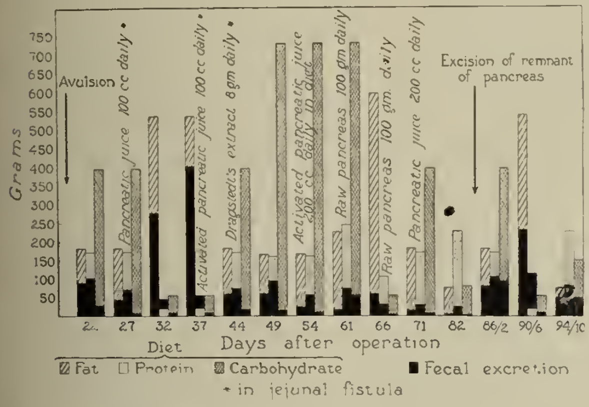


FIG. 3. Metabolic experiments on dog 716.

Dog 716, male, 10.2 kilograms, was subjected to evulsion of the pancreatic ducts. Metabolism experiments, commenced 25 days postoperatively, revealed the usual fecal loss of foodstuffs; however, unlike similarly treated animals, this dog's nutrition remained good, and experiments started on the 71st and 82nd postoperative days revealed normal utilization of food. On the assumption that the ducts had been incompletely evulsed, the dog was again operated upon, and the atrophic pancreas appeared as a barely discernible fibrous strand; however, a small nodule of viable pancreatic tissue, about 1 cm. in size, was found along the duodenum. This nodule was carefully excised and found to weigh 425 milligrams, and represented by weight about 1/30th of the normal pancreas; it was composed of normal pancreatic tissue. Further metabolic experiments were conducted and immediately the fecal loss of fat was increased (fig. 3).

It is inconceivable that this tiny remnant was capable of producing sufficient pancreatic juice to sustain normal fat digestion. Only by drawing an analogy to the function of a remnant of the glands of internal secretion, such as the thyroid and parathyroid, could a suitable explanation be advanced. Continued investigations revealed additional evidence to support the view that the pancreas elaborates a hormone which controls fat utilization. Fresh pancreatic juice was administered to these animals in physiologic amounts, both by mouth and via a high jejunal fistula. An appreciable improvement in the utilization of protein and carbohydrates followed, but the fat loss was unaltered.[15] However, the administration of raw beef pancreas to these animals resulted in an appreciable diminution in the fecal loss of all the foodstuffs including fat (fig. 1). That the abnormal loss of fat could not be attributed to failure of fat digestion was evidenced by the fact that on extraction from the feces most of the fat had been broken down, appearing in the form of fatty acids. Finally, it was observed that in some experiments the amount of fat excreted in the feces actually exceeded the amount of fat ingested.

These experimental data allow of only one logical deduction. The pancreas produces an internal secretion, distinct from insulin and lipocaic and absent from the pancreatic juice, which controls the utilization of fat by the body.

Either total removal of the pancreas or evulsion of the pancreatic ducts with allowance of time for atrophy of the pancreatic remnant effectively removes the influence of this hormone, under which conditions ingested fat is well digested and probably absorbed, but then escapes utilization, being excreted in much the same way as sugar when insulin is lacking.

Pathology.—The changes in the pancreas after experimental evulsion or ligation of the ducts are identical with those changes which occur clinically as the result of duct obstruction in chronic pancreatitis, pancreatic neoplasms, and pancreatic lithiasis. The pathologic picture is characterized by gradual degeneration of the acinar tissue, which is replaced by increasing amounts of fibrous tissue. It is interesting that the progress of the atrophy of the acinar elements coincides exactly with the development of the maximal loss of fat in these animals.[14] The islands of Langerhans persist and often appear hypertrophic, thus accounting for the absence of diabetes. Similar pathologic changes have been observed in chronic pancreatitis and in congenital pancreatic steatorrhea.[16]

Symptoms and Diagnosis.—The clinical diagnosis of chronic pancreatic insufficiency is difficult except in advanced cases. The passage of large, foul-smelling stools containing fat and undigested meat fibres frequently occurs. Flatulence and dyspepsia are the rule. Weight loss and inanition result from the impaired absorption of ingested food, and for the same reason a deficiency of the fat-soluble vitamins may occur. In the diagnosis of chronic pancreatic insufficiency, other causes of steatorrhea, such as celiac disease, sprue, idiopathic steatorrhea obstruction of the biliary passages, gastrocolic fistula, and mesenteric tuberculosis, must be considered. Accurate metabolic studies of fat intake and output are of the greatest diagnostic value, but unfortunately such studies are usually too painstaking to be practical. The estimation of the blood amylase level is of little or no value. The most dependable diagnostic test is the determination of the serum lipase level which has been found by Comfort[17] to be elevated in most of these cases. Formerly the determination of the enzymic activity of the aspirated duodenal contents had not yielded satisfactory results, but since Lagerlöf[18] recently devised a gastroduodenal tube which allows the aspiration of uncontaminated duodenal contents, this pancreatic function test has become more useful, especially when the pancreatic juice is obtained after an injection of secretin, the hormonal stimulant of the pancreas. Comfort et al.,[19] in reporting a wide clinical experience with this secretin test, found an absent or diminished enzymatic activity of the duodenal contents in chronic pancreatic disease.

Treatment.—In the light of the previously recounted experimental data, the treatment of chronic pancreatic insufficiency may now be placed on a rational basis. In an effort to compensate for the decreased utilization of food, the individual should be literally stuffed. An ample supply of fat-soluble vitamins is necessary. If obstruction of the pancreatic ducts exists, as in pancreatic lithiasis, surgical relief is indicated. If the presence of a fatty liver is evidenced by hepatomegaly or by the results of liver function tests, lipocaic should be administered orally. Commercial extracts of whole pancreas and pancreatic enzymes were found by me to be woefully lacking in potency when assayed in metabolism experiments.[15] Until more information concerning the fat-utilization factor is available, raw beef pancreas should be fed. I have had the experience of eating a very palatable lunch into which a skilled dietitian was able to incorporate 250 grams of raw beef pancreas. Stoesser,[20] working with children, demonstrated a very significant elevation of the blood fats after the administration of raw or dried beef pancreas.

CHRONIC PANCREATITIS

The customary division of chronic pancreatitis into interlobular and interacinar types makes for clarity, but such a distinction is by no means always possible. In the former the pancreas is nodular, while in the latter it is firm and smooth, the fibrosis involving the islands, and this type is often associated with diabetes and arteriosclerosis.

Although the etiology of this condition is varied, the majority of cases are of biliary origin, resulting from repeated attacks of acute pancreatic edema, and occasionally it represents a residuum of acute pancreatic necrosis, in which case diffuse calcification of the gland may result. The concomitant occurrence of chronic pancreatitis and portal cirrhosis is too frequent to be coincidental, and these two conditions probably represent parallel phenomena. This association is well illustrated in hemochromatosis. Less frequently chronic pancreatitis is due to syphilis, peptic ulcer, and tuberculosis.

On the basis of the symptomatology most cases fall into one of four syndromes:

A. *Pancreatitis with Icterus.*—According to Friedenwald,[21] jaundice occurs in about 40 per cent of cases, and results from compression of the common bile duct as it traverses the head of the pancreas. It is this type of case which is often indistinguishable from carcinoma of the head of the pancreas, even after surgical exploration. In a review of a large series of cases of carcinoma of the head of the pancreas, the author found that not infrequently a patient survived for many years following cholecystogastrostomy. Obviously these were cases of chronic pancreatitis rather than carcinoma. Fraser[22] stresses the initial occurrence of jaundice in chronic pancreatitis as contrasted with the occurrence of anorexia and weight loss before icterus appears in cancer of the head of the gland.

B. *Pancreatitis with Pain.*—Epigastric or diffuse upper abdominal pain, varying from a dull ache to severe paroxysms, is the outstanding complaint.

C. *Pancreatitis with Dyspepsia and Enterocolitis.*—French writers stress the frequent occurrence of this syndrome, which is characterized by gastric upsets and alternating constipation and diarrhea.

D. *Pancreatitis with Pancreatic Insufficiency.*—The clinical features of pancreatic insufficiency have already been discussed.

The treatment of chronic pancreatitis is essentially the same as that of chronic pancreatic insufficiency. For the surgical relief of jaundice, cholecystogastrostomy, as recommended by Fraser,[22] or cholecystojejunostomy, which Lahey[23] favors, are the operative procedures of choice. According to Fraser, 60 per cent of his cases were living and well 1 year after surgical relief of the jaundice.

PANCREATIC NEOPLASMS

The majority of pancreatic neoplasms are of the columnar-cell type, derived from the lining epithelium of the ducts and acini. Grauer,[24] in a study of these neoplasms, noted the frequent occurrence of a significant papillary overgrowth of the epithelium, even to the development of a malignant adenoma, in the ducts distal to the carcinoma. This same papillomatous change was striking in a case seen by me (fig. 4). It is an interesting speculation that this epithelial proliferation may constitute a premalignant lesion similar to polyps of the colon. According to Rives, 85 per cent of pancreatic carcinomas occur in the head of the gland.

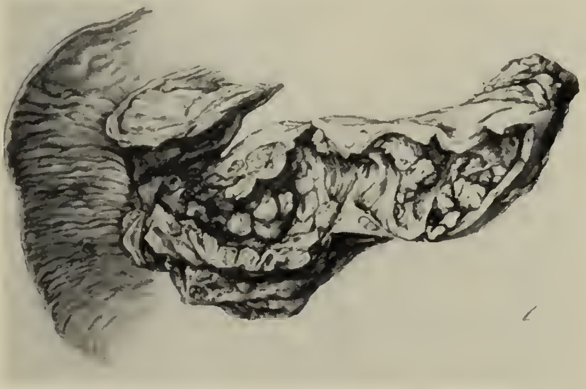


FIG. 4. Carcinoma of the head of the pancreas with papillomatous overgrowth of the mucosa in the distal dilated duct.

The early symptoms are characteristically vague. Indeterminate weakness, rapid weight loss, and anorexia in an individual past middle life usually herald the onset. Upper abdominal pain of variable intensity is seldom absent. Ransom[25] was able to palpate an epigastric tumor in 39 per cent, while in only 15 per cent was a dilated gall bladder palpable.

The diagnosis is usually based on the appearance of a painless and progressive jaundice. However, as Dunphy[26] has pointed out, in 40 per cent of cases jaundice is absent in the early stages, and he stresses the occurrence of three significant symptoms in these individuals, namely, unexplained diarrhea, persistent nausea unrelated to meals, and a peculiar, unbearable epigastric distress. That considerable advance has been made in the roentgenologic diagnosis of these neoplasms is attested by reports of roentgenologic identification of the tumor in as many as 70 per cent of cases.[23, 25] Widening of the duodenal loop or evidence of extrinsic pressure on the duodenum are the usual criteria upon which a roentgenologic diagnosis is based.

Heretofore, treatment was confined to palliation. Insufferable pruritus develops in many cases, accounting for the high incidence of suicide in this disease. Surgical relief of the jaundice is recommended in spite of the fact that the average duration of life, which is 7 months, is not lengthened by this palliative surgery. Irradiation of the neoplasm was found by Lahey[23] to increase the average duration of life to 16 months. Gastroenterostomy for the relief of duodenal obstruction is required in about 10 per cent of cases.

It has been only in recent years that surgeons have developed the temerity to attempt radical extirpation of these lesions. Whipple,[27] the pioneer in this field, devised a formidable surgical procedure, which consists of a first stage cholecystojejunostomy and ligation of the common bile duct, followed by a gastroenterostomy and "en bloc" resection of the duodenum and head of the pancreas. Although no permanent cures have yet been obtained, the feasibility of the operation has been proven by the immediate survival of half of the reported cases with resection. The importance of treatment of the postoperative pancreatic insufficiency in these individuals is obvious.

An interesting group of tumors are those adenomas and carcinomas derived from the islands of Langerhans and associated with hyperinsulinism. Symptoms of mild or severe hypoglycemia develop and are prone to occur in the morning before eating, or after strenuous exercise. Attacks vary from mild, transient spells of weakness and mental confusion to severe epileptiform seizures. Permanent mental deterioration may ensue. Not infrequently these cases are referred to neurologists or psychiatrists with a diagnosis of epilepsy, hysteria, toxic psychosis, or brain tumor. The diagnosis is established by finding a lowered blood sugar, usually 35 to 50 milligrams per cent, during an attack or after 12 to 24 hours of fasting. However, other causes of hypoglycemia, such as hepatic disease, Addison's disease, hypothyroidism, hypopituitarism, and progressive muscular atrophy, must be assiduously excluded before a diagnosis of hyperinsulinism is permitted.

In approximately half of these cases, an islet tumor is found on surgical exploration. The majority are adenomas, and according to Frantz,[28] metastasis is rare, even when histologic evidence of carcinoma is observed. Resection of these tumors has been followed by strikingly good results. On failing to find a definite pancreatic tumor, partial pancreatectomy has been attempted. However, Graham[29] and David[30] have demonstrated that nothing short of subtotal removal of the pancreas will control the symptoms in these patients. Certain selected cases should not be subjected to surgery, inasmuch as the symptoms can be controlled by the use of a high carbohydrate diet.[31]

PANCREATIC CYSTS

Since the majority of pancreatic cysts arise from the tail of the gland, these lesions are infrequently associated with chronic pancreatic insufficiency. The classification of Mahorner and Mattson[32] embraces all types of pancreatic cysts.

(A) *Cysts of Developmental Origin.*—These are usually encountered in children and are often multiple, and at times are associated with cysts of the kidney, liver, or central nervous system. In Lindau's disease, multiple pancreatic cysts are found in association with cysts of the kidney and hemangiomas of the brain. Nygaard and Walters[33] have reported a case of multiple congenital cysts confined to the tail of the pancreas in which a partial pancreatectomy was carried out.

(B) *Traumatic Cysts.*—The occurrence of a pancreatic cyst following severe abdominal trauma cannot be disputed, and in Schmieden and Sebening's[34] series, 12 per cent were of this type.

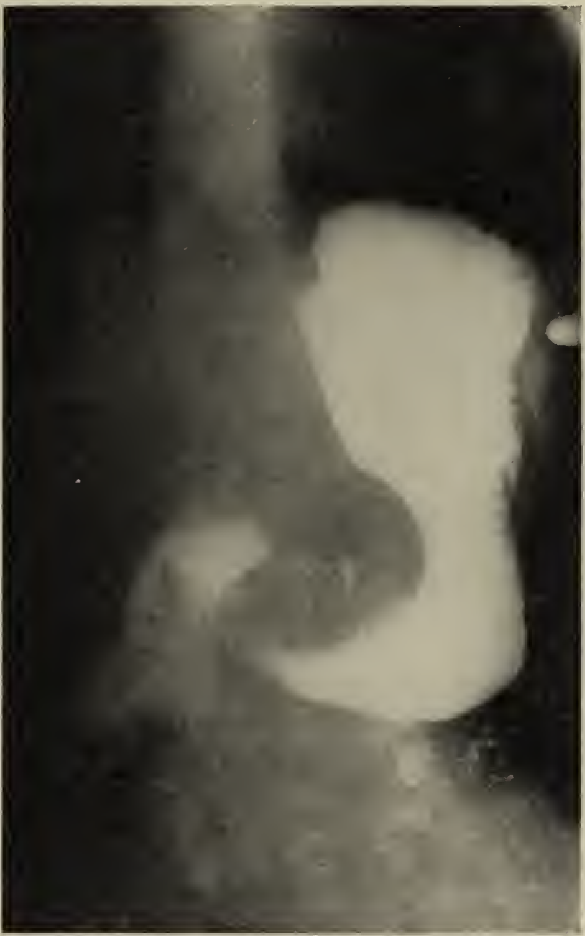
(C) *Retention Cysts.*—This forms 'the largest group of pancreatic cysts, many of which follow acute necrosis of the pancreas.

(D) *Neoplastic Cysts.*—Cystadenomas and cystadenocarcinomas constitute approximately 10 per cent of all pancreatic cysts. Dermoid cysts and teratomas occur less frequently. An interesting case of a cystic lymphangioma of the pancreas has been reported by Masse et al.[35]

(E) *Parasitic Cysts.*—Echinococcic cysts of the pancreas are extremely rare.

The outstanding objective finding is the palpation of an upper abdominal tumor which usually is quite mobile. In a case brought to my attention, the position of the cyst frequently changed from the left upper quadrant to the right lower quadrant. The location of this tumor in the tail of the pancreas accounted for its unusual range of motion. Pain, usually of a dull character, is common. The cyst usually presents anteriorly through the gastrocolic omentum, although its relation to the stomach and colon may vary. Roentgenologic examination of the gastrointestinal tract is of the greatest importance in excluding tumors of the stomach and colon. However, Case[36] mentions the diagnostic importance of the roentgenologic demonstration of extrinsic pressure by the cyst on the stomach (fig. 5). Wiese and Larimore[37] found that of 21 epigastric extra-alimentary tumors, 18 were of pancreatic origin. Deposition of calcium in these cysts is of infrequent occurrence, but occasionally its roentgenologic demonstration is of decided diagnostic aid.

The ideal treatment of a pancreatic cyst consists of total extirpation. However, this is not technically feasible in large tumors with numerous adhesions, and as Judd[38] noted, total removal of the cyst is seldom possible. Marsupialization with immediate or deferred drainage of the cyst is the usual treatment of choice. Following this procedure a pancreatic fistula develops but seldom persists for more than 6 months. However, in a case observed by me, persistent drainage of pancreatic juice has continued for 9 months, in spite of strenuous efforts to promote its closure. Among the methods recommended for treatment of such a pancreatic fistula, the most successful are treatment with radium,[39] application of sodium morrhuate to



Courtesy of U. S. Army Medical Museum.

FIG. 5. Filling defect of lesser curvature of the stomach due to extrinsic pressure by a pancreatic cyst.

the fistulous tract,[40] and similar treatment with formalin. Neoplastic cysts require total removal. However, cystadenocarcinomas are rarely operable, although an occasional successful resection has been reported.[41] Walters' method of marsupialization and insertion of radium into the cyst through a hard rubber tube permits effective palliative therapy.

Pancreatic Lithiasis

The presence of stones in the pancreatic ducts is a relatively rare condition, but the danger of overlooking these calculi demands a knowledge of their significance. Haggard and Kirtley,[42] in a complete survey of the literature, were unable to collect more than 204 more cases, in 58 of which the stones were removed with a mortality of 17 per cent. The stones are usually multiple and vary in size from 10 millimeters to 5 centimeters. As in the formation of stones elsewhere, stasis and infection are the primary etiologic factors. This condition is invariably attended by symptoms of pancreatic insufficiency, and usually the pancreas is very atrophic. Removal of the stones does not ensure a return of pancreatic function, and not infrequently the patient continues to have steatorrhea and other symptoms of pancreatic insufficiency.[43] Pain, usually of a colicky type, is present in all cases, while jaundice occurs in 25 per cent, and glycosuria in 10 per cent. The final diagnosis rests upon the roentgenologic demonstration of the calculi, which are composed of calcium and are radiopaque. Because of the extreme difficulty in differentiating these shadows from calcified aortic nodes or kidney stones, Engelstadt and Romcke[44] recommend that the diagnosis of pancreatic calculi be based on the roentgenologic demonstration of the stones in a horseshoe area, delineated by an indwelling duodenal tube passed to the duodenojejunal angle. It is extremely important to distinguish between true intraductal calculi and calcification of the parenchyma of the pancreas, which usually is a sequela of acute necrosis. Beling[45] collected 12 cases of this "disseminated calcification of the pancreas," in most of which there was history of a previous attack of acute pancreatic disease. In 2 cases of pancreatic calcification seen by me, there was little difficulty in distinguishing this condition from true lithiasis because of its typical roentgenologic appearance (fig. 6).

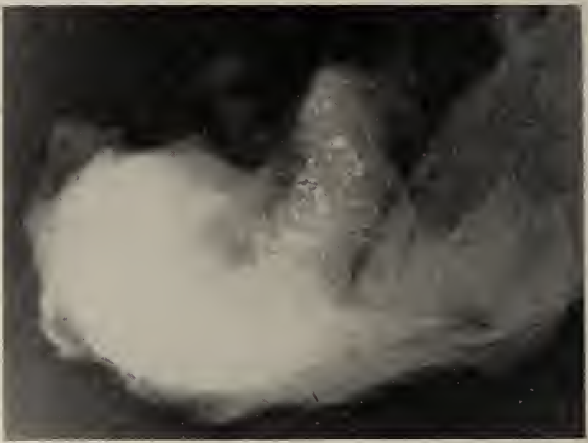


Fig. 6. Roentgenogram of an excised pancreas showing disseminated calcification of the gland.

In order to prevent further atrophy of the gland, surgical removal of the stones is imperative. Approach to the pancreas through the gastrocolic omentum is favored, and the calculi are removed by cutting down on the dilated duct. Closure of the duct is usually followed by a transient fistula. Loeper et al.[46] reported a case in which dissolution of the stones and diminution in the severity of the complicating diabetes mellitus followed treatment with phosphoric acid orally. However, others have failed to duplicate his results with this acidification therapy.[47] In cases of calcification of the pancreas, surgical attempts to remove the calcified plaques have been fraught with failure.

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(*Continued on page 208*)

THE ETIOLOGY AND TREATMENT OF GAS GANGRENE

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I HAVE investigated the subject of gas gangrene because (1) it is a very fulminant and crippling, if not fatal, infection; (2) in recent years newer methods of treatment have been tried which have aroused sharp differences of opinion as to their efficacy; (3) the present war will probably focus more attention on this disease; and (4) although it is not common in civil practice, we must be ever mindful of its possibility in these days of the increasing incidence of accidents.

It has been estimated that there are approximately 100 members of organisms in the genus clostridium or bacilli which grow in the absence of oxygen and form spores. Only about 8 of these, however, are pathogenic for man, namely, the tetanus, botulinus, aerogenes capsulatus, vibrion septique, oedematiens, sordelli, histolyticus and fallax bacilli. The last 6 organisms have been identified with the etiology of gas gangrene.

The first causative organism to be discovered was the Clostridium vibrion septique isolated in 1877 by Pasteur. The same organism was later studied by Koch and Gaffky and by them named the bacillus of malignant edema. It is said to cause about 15 per cent of cases of gas infection. In 1892 Welch and Nutall, and a little later Frankel, described the Clostridium aerogenes capsulatus or Bacillus perfringens which has since been found to be responsible for approximately 85 per cent of cases of gas gangrene. The other organisms are rare causes, the Clostridium oedematiens, isolated by Novy in 1894, and the Clostridii sordelli, histolyticus and fallax. There may still be others. These anaerobes are found in the intestines of man and animals, in feces, soil, woolen goods and wads of shotgun shells. They usually invade dirty lacerations and destructive wounds such as those produced by accidents, compound fractures and war casualties. Gas gangrene, however, has been reported following minor abrasions, hypodermic injections, operative procedures such as laparotomy and amputation, and following obstetrical delivery and abortions.

These pathogenic anaerobes are not to be confused with the proteolytic and saccharolytic, gas-forming anaerobes found in soil and food and at times in the organs and muscles of man and animals, and which produce putrefactive gangrene in older people, and in those suffering from circulatory failure, arteriosclerosis, diabetes and Buerger's disease. This putrefactive infection is not as rapid nor toxic as, but is sometimes mistaken for, true gas infection. Its treatment is less radical, and the gas antitoxin is useless.

From studies of gas gangrene made at Evacuation Hospital No. 8 in France during the World War, the Surgeon General[1] reported that 53 per cent of cultured wounds showed anaerobic bacilli, but that two thirds of severe non-transportable wounds contaminated with anaerobic bacilli failed to develop gangrene. This substantiated previous experimental evidence that the organisms alone were not capable of producing gangrene. They will not affect healthy tissue but thrive only when the body cells are impaired by some chemical or mechanical factor. To produce symptoms they must be accompanied by cellular damage of muscle or failure of circulation. The discovery of the toxin of Bacillus welchii by Bull and Pritchett[2] in 1917 and the experimental work of DeKruif and Bollman[3] in the same year led to a better understanding of the action of the organism. The spores of the anaerobe enter the wound, germinate in damaged muscle, and produce a toxin. The toxin diffuses in the edematous fluid that accompanies the infection and rapidly causes necrosis of more tissue to furnish a new medium for the growth of the organism. The production of gas beneath the fascial sheaths serves to cut off circulation by increased tension and to produce ischemia and massive death of muscle. Finally, by rapid growth the organism is able to produce sufficient toxin to bring about a toxemic fatality. Along with this infection there are frequently found the aerobic streptococci and staphylococci which act in symbiosis with the gas-forming anaerobes.

So rapid is the spread of gas gangrene that immediate therapeutic action is demanded. In 1846 Velpeau noted that the emphysema complicating fractures, even from the first day before the appearance of gangrene, indicated amputation. Symptoms may develop as early as two hours after injury. Cantril[4] stated that during the World War 13 per cent of patients with gas gangrene had developed clinical signs of gas within 6 to 12 hours following injury. In contrast, I have personally witnessed the case of a young girl who lost a leg because of gas gangrene which did not develop for 8 days following a compound fracture of the leg caused by a sledding accident.

The incidence of gas gangrene has lessened with the improved methods of prophylaxis, and the mortality, formerly 50 per cent or more (and then only with a high incidence of amputation), has also dropped with improved methods of treatment. Woolsey and Gottschalk[5] stated that in 1914 gas gangrene occurred in 12 per cent of wounds. From the Surgeon General's report[1] there were 206 amputations required among 4,683 wounded given surgical treatment at Evacuation Hospital No. 8 during a short period in the fall of 1918. Of these 206 amputations 46.6 per cent (or 96) were for gas gangrene. Of this hospital's admissions 5 per cent of those wounded in action developed gas infection. The disease was the second most important cause of death, the mortality being 17 per cent. At Base Hospital No. 15 the mortality rate was 26.45 per cent. Of all World War I casualties among the American Expeditionary Forces the Surgeon General reported the incidence of gas gangrene in wounds of soft parts only, exclusive of those due to chemical warfare gases, to be 1.08 per cent and the mortality rate 48.52 per cent. The incidence of gas infection in wounds including fractures was 6.26 per cent and the mortality rate 44.62 per cent. Hawking[6] wrote in February 1941 that the average incidence of gas infection among air-raid casualties of two British towns was 1.5 per cent. Perhaps the lowest mortality rate was 8.1 per cent in 123 cases of gas gangrene reported by Kelly[7] in 1938.

The surgical treatment of gas gangrene includes such procedures as prophylactic sterilization and excision of dirty wounds, wound irrigations, thorough débridement, multiple incisions, and finally amputation. The early surgical prophylaxis of wound infections cannot be too strongly emphasized. The sterilization and irrigation of potentially infected wounds was formerly done with various antiseptics, mainly Dakin's solution, hydrogen peroxide, and potassium permanganate. Today authorities claim that these solutions do additional cellular damage to the depths of the wound. It is recommended that the surrounding skin surface be cleansed and painted with antiseptics but that the wound itself be profusely irrigated with normal salt solution. The prophylactic excision or débridement of the wound should be thorough, and enlargement of the skin opening may be necessary for its accomplishment. All foreign material and crushed and devitalized tissue must be removed, leaving only healthy, bleeding contractile tissue. Care should be exercised to avoid damaging the nerve and vascular supply of muscles. Such wounds are perhaps best packed open rather than closed by primary suture. Tourniquets, tight bandages and tight packing of wounds predispose to the development of gas infection and should not be employed. The wounds of compound fractures may be similarly treated and the fracture reduced by prolonged traction. Early immobilization and restricted manipulation reduce the soft tissue trauma and thereby minimize the chance of infection.

After the development of gas infection, débridement and multiple incisions may be employed. The débridement should be radical and thorough. All devitalized and gangrenous tissue must be excised even to the extent of the removal of entire muscles. Multiple incisions, made freely, should divide the deep fascia and the muscular aponeuroses to afford drainage and relieve tension by permitting the escape of gas in an effort to preserve the circulation of the affected part. Amputation is often required. It frequently does not eradicate the infection. It is to be remembered that the gas spreads beneath the skin faster than the gangrene, and conversely the gangrene of the skin is not as far advanced as is the gangrene of the muscles. Most authorities discourage the use of amputation as the first surgical procedure to be employed. It adds additional shock to an already critical condition. When necessary, amputation is done by the guillotine method and the wound left open. To all of these therapeutic surgical procedures should be added supportive care including the free administration of fluids and multiple blood transfusions.

Until the time of World War I and even in its early years the treatment of gas gangrene was entirely surgical. In 1917 Bull and Pritchett[2] isolated the soluble toxin of Bacillus welchii, prepared an antitoxin, and succeeded in producing active immunity in laboratory animals to the organism. In the same year Weinberg and Séguin[8] isolated the toxin of the Clostridium vibrion septique and similarly prepared an antitoxin. It was chiefly these accomplishments that resulted in the use of serum therapy during the latter part of the first World War. The prophylactic intramuscular injection of anti-gas serum has now become almost routine. For prophylaxis the gas and tetanus antitoxins are combined, since both anaerobes are apt to contaminate the same type of wounds. One dose includes 1,500 units of tetanus, 2,000 units of perfringens and 2,000 units of vibrion septique. For therapeusis the antitoxin is given frequently and in large amounts both intramuscularly and intravenously. There are two therapeutic sera obtainable, neither containing tetanus antitoxin. One consists of 10,000 units of perfringens and 10,000 units of vibrion septique. The other, a polyvalent serum, includes 10,000 units of perfringens, 10,000 units of vibrion septique, 1,500 units of oedematiens, 1,500 units of sordelli and 3,000 units of histolyticus.

The use of anti-gas serum both as a prophylactic and therapeutic agent is still debatable. Some authors report a reduced mortality with the use of serum and others, failure. Bohlman[9] stated that the antitoxin was disappointing, and many share his opinion. On the contrary Kendrick[10] and others have found that the antitoxin provided effective protection against experimental gas infection in guinea pigs. Gordon and McLeod[11] concluded from experimental studies that the serum was more effective as a prophylactic than as a therapeutic agent. Holmblad and Matson[12] believe that the nondependability of the serum is probably due to inadequate dosage rather than the absence in the serum of other gas-producing organisms. They suggest using the therapeutically prepared dose of 20,000 units for prophylaxis and injecting the antitetanic serum separately. Craig[13] reported cases successfully treated with large doses of antitoxin and recommended an initial therapeutic dose of 50,000 to 100,000 units and a total dosage of as much as 250,000 units given both intramuscularly and intravenously.

X-ray therapy for gas gangrene was first reported in 1933 by Kelly.[14] In 1938 Kelly and his co-workers[7] reported 123 cases with 10 deaths or a mortality rate of 8.1 per cent. Of 105 cases with involvement of the extremities there were 6 deaths and in 18 cases with involvement of the trunk 4 deaths. He showed a mortality rate of 9.1 per cent (3 deaths) in 33 cases with amputation and a mortality of 4.0 per cent (3 deaths) in 72 cases without amputation. Kelly classified amputations as (1) those of necessity as required by the character of the injury or done late in the disease because of gangrene, and (2) those for therapeusis performed in the first few hours. In 16 necessary amputations the mortality rate was 6.2 per cent (1 death), and in 17 therapeutic amputations the mortality rate was 11.7 per cent (2 deaths). Kelly recommended X-ray treatment as an adjunct to other therapeutic measures. He did not discourage the use of surgery, but wished to discourage the surgeon who is inclined to mutilate unnecessarily or to amputate. He could not explain whether X-ray treatment affected the gas organism, its toxins, aided the tissues in neutralizing the toxins, or detoxified the infected tissues. Treatments were given twice daily for 3 to 5 days, using 100 r per port with aluminum filtration, regardless of how many ports were required. The treatments were spaced to coincide approximately with the rate of growth of the organisms on culture media.

Godby[15] and Cantril[4] each reported a few patients successfully treated with roentgen therapy. The latter quoted the report of 34 cases at the San Francisco Hospital treated by Williams and Hartzell, one half with X-ray treatment showing a mortality rate of 8 per cent and one half without X-ray treatment showing a mortality rate of 58 per cent. Bowen[16] gave 40 patients with lacerated wounds and compound fractures prophylactic roentgen therapy. There were no adverse effects; 2 cases of gas infection developed with recovery. He recommended the better development of mobile X-ray units for their use in military hospitals. I have been unable to find any reports of X-ray therapy for gas gangrene in the present war.

Caldwell and Cox[17] criticized the reports of roentgen therapy for gas gangrene. They claimed that the authors failed to consider the level of the lesion on the extremity, the amount of muscle tissue involved, or the character and extent of the surgical measures employed. They pointed out that very little scientific work had been done to evaluate the effect of X-ray therapy. They also noted that the X-ray dose was small, whereas it took a very large dose (38,400 r), when played upon nutrient fluids, to be deadly to protozoa by producing small quantities of hydrogen peroxide. Caldwell and Cox treated a large series of guinea pigs with implanted Bacillus welchii infections by various surgical methods with and without X-ray therapy. They concluded that X-ray treatment had no real prophylactic effect, but that it might be of some value as an adjunct to surgery although certainly could never be substituted for it. Cantril[4] quoted Cubbins, Callahan and Scuderi as having been positive that X-ray treatments of gas infection had little if any value and that no amount of it would serve to disturb the growth and reproduction of gas bacilli when applied to cultures.

In 1937 Meleney and Johnson[18] successfully treated gas infections by débridement and the local application of zinc peroxide suspended in distilled water. The solution was poured into the recesses of the wound and sealed over with vaseline gauze. Caldwell[19] found experimentally that this method of treatment prevented the development of gas infections in most instances. No further use of this drug in gas gangrene has been found reported.

The use of the sulfonamide compounds in the treatment of gas gangrene was reported by Bohlman[9] in July 1937. Three patients whose gangrene followed compound fractures of extremities recovered with the oral administration of sulfanilamide, surgery and serum. Bohlman believed the drug might have a specific effect on the gas bacillus or check its symbiotic growth with streptococci. Since that time a number of experimental studies have been undertaken to determine the usefulness of the sulfonamide compounds, administered in various ways, in both the prophylaxis and therapeusis of gas gangrene and also the comparative value of these drugs and serum.

Long and Bliss[20] reported good results experimentally with sulfanilamide therapy. On the other hand, Kendrick[10] concluded that the sulfonamide compounds did not protect guinea pigs against gas infection and that the anti-gas serum was more effective. However, more recent experimental studies in this country, England and Canada seem to point to the following facts: (1) that sulfathiazole is the most effective compound, (2) that its effect is much less than against aerobic bacteria, (3) that it is more valuable in prophylaxis, (4) that it is more efficacious when applied locally for the higher local concentration obtainable, and (5) that its effectiveness is reduced by delayed application. Opinions as to the comparative value of the sulfonamide drugs and serum differ, but there seems to be agreement that the best results are obtained when both are used prophylactically. Swan[21] reported recovered cases of gas infection from wounds of the present war by the combined use of surgery, anti-gas serum and sulfanilamide intravenously. Love[22] has treated gas infections among wounded men from the western front of the present war with excellent results by the oral and intravenous administration of sulfapyridine plus surgery.

REPORT OF CASES

Case 1.—A colored woman of 62 years was seen December, 1935. She had a fibroid uterus, cataracts in both eyes, diabetes mellitus with acidosis, bronchitis and moist gangrene of the right great toe. The toe was black, the epidermis was loose, a serosanguineous discharge was present about the nail, and there was crepitus of air in the toe only. The condition appeared to be that of diabetic gangrene with a putrefactive infection and not a true gas gangrene. A lower-leg amputation was done under spinal anesthesia without a tourniquet. On the third day there was evidence of gas infection in the stump. A culture of the wound showed Bacillus welchii and hemolytic streptococci. The stump was opened, daily débridements were done in the patient's room without anesthesia, and the wound was constantly irrigated with Dakin's solution (fig. 1). She received 40,000 units of perfringens antitoxin intramuscularly above the lesion and 12 blood transfusions. X-ray therapy was used but was begun late in the course of the infection. She was given, however, 8 roentgen treatments in all. Her condition was complicated by bronchopneumonia. At the end of the seventh week and after a low bacterial count of the wound an upper right thigh amputation was performed. She left the hospital at the end of the tenth week. Complete healing of the stump did not occur until 4 months later. She is still living.

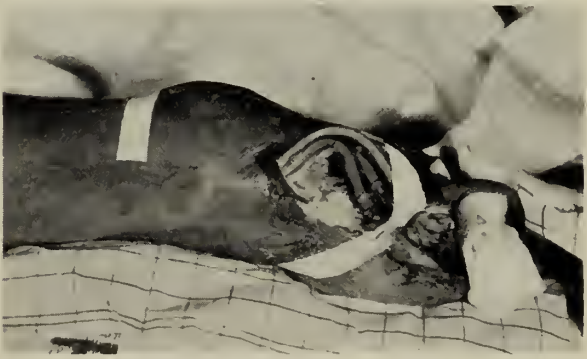

FIG. 1. Case 1. Gas infection following leg amputation with gas bleb above knee and irrigation tubes in stump.

Case 2.—A left-handed, white boy of 6 years came to the hospital in May, 1941 immediately after suffering a compound fracture of both bones of the right forearm about the middle. The small wound was cleansed and left open, and a prophylactic dose of anti-gas and antitetanic serum was administered. Fluoroscopic reduction failed, and prolonged traction was applied. On the third day gas infection developed and spread rapidly (fig. 2). X-ray therapy was begun, and multiple incisions were made over the entire right arm. A culture revealed Bacillus welchii. Blood transfusions were given, and 26,000 units of polyvalent anti-gas serum was administered intravenously. Skin discoloration and crepitation extended up to the shoulder and into the axilla. On the fifth day the infection appeared arrested, but there was definite gangrene of most of the right arm. On the sixth day a guillotine amputation was done at the middle of the upper arm, where a definite line of demarcation had formed. Necrosis of the intermuscular septa and gas had extended up beyond the level of amputation, and the wound was dressed and left open.

Three weeks later the humeral stump was shortened to facilitate healing, which was slow. He had been given 6 blood transfusions in 5 days and 4 X-ray treatments (9 ports) within 3 days. One dose of 2 grams of sulfathiazole was given per rectum because of vomiting, but was then discontinued. The boy has now returned to school.

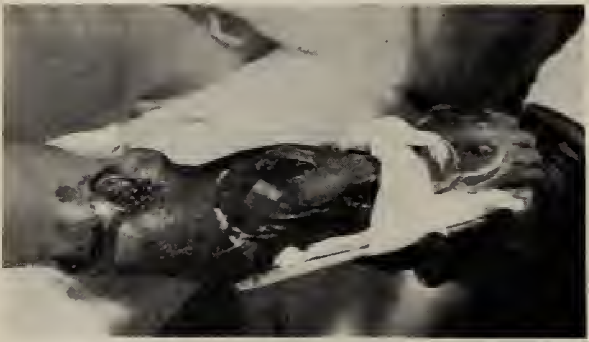

Fig. 2. Case 2. Gangrene of right arm 2 days after onset of gas infection with multiple incisions and line of demarcation above elbow.

Conclusions

Apparently no new discoveries have been made in reference to the etiologic organisms of gas gangrene or their modes of action.

Both the incidence and mortality of gas infections have been reduced by improved methods of prophylaxis and therapeusis.

The early and thorough surgical care of infected wounds is the most important prophylactic measure. Amputation should probably not be employed early in the course of the infection.

Anti-gas serum, though still of debatable value, is probably of more value as a prophylactic agent. Larger dosages are recommended by some authors.

X-ray therapy appears to be a valuable adjunct. More extensive use of this harmless modality is certainly justified.

The early local application of sulfathiazole is of value prophylactically.

Gas gangrene is such a rapid, crippling and often fatal infection that one is not justified in omitting any prophylactic or therapeutic procedure which offers any hope of benefit.

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Tuberculin testing in a secondary school in Canada disclosed that out of 16 pupils who used the school bus 15 reacted positively to tuberculin, and one proved to be in the early stage of tuberculosis when X-ray examination was made. The driver of the bus, when examined, was discovered to be an open case of tuberculosis. Thirteen of the children were the only positive reactors in their respective families. The report of this investigation was made by William D. Hay, M.D., to the Canadian Public Health Assn., December 1941. Can. P. H. Jour., January 1942.

Routine collapse therapy of minimal pulmonary tuberculosis is not justified. Conservative therapy is the treatment of choice. From 75 to 80 per cent of the cases (studied) resolve or fibrose and become stable with bed-rest and remain well. I. D. Bobrowitz, M.D., Amer. Rev. of Tuber., March 1942.

ANDROGEN THERAPY OF AGITATED DEPRESSIONS IN THE MALE

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IN ANOTHER place one of us[1] has reviewed the literature of estrogen therapy of agitated depressions occurring in association with the menopause and reported the successful use of estrogens in such cases. The favorable results obtainable in women has suggested the use of analogous therapy in men believed to be suffering from involutional depressions. A review of the English language literature for the five and one-half years ending June 30, 1941, indicates that a belief in the efficacy of hormone therapy in such cases is not without foundation.

Because of the comparative rarity of the disease, it is impossible for observers at a single hospital to treat a group sufficiently large to have statistical importance; and because the therapy is not successful in all cases, it is easy for the results in a single series of patients to be either more favorable or less favorable than the realities of the situation require. Thus Barahal[2] treated 5 patients with testosterone propionate without any improvement, while Guirdham,[3] Ketcham,[4] Lamar,[5] Miller, Hubert and Hamilton,[6] Pardoll and Belinson,[7] Thomas and Hill,[8] and Werner[9] treated in all 30 patients, with recovery or marked improvement in 21, and temporary improvement in 4 others.

Some allowance must be made, in considering the favorable reports, for the fact that successes are more likely to be reported than failures. From the small number of cases already described in the literature it is not safe to conclude that in any series of properly selected patients it is possible to cure 60 per cent, unless the present methods of selection can be improved. The difficulties of diagnosis in the case of male involutional psychoses are certainly not less than in the case of the menopause psychoses; in such disorders, the incidence of recovery among 164 adequately treated cases was found to be only 48 per cent,[1] probably because of difficulty in excluding from the series late schizophrenics, early arteriosclerotics, and other unsuitable patients.

It has frequently been claimed that at least some of the recoveries under hormone therapy are due to suggestion. In the study of the menopause psychoses, one of us[1] attempted to meet this objection by the use of placebos before potent therapy, and in the present study a similar technic was adopted.

MATERIALS AND METHODS

For this study there were selected 5 cases of agitated depression occurring in men aged 50 or over who were diagnosed by the hospital staff as suffering from involutional melancholia. Some degree of arteriosclerosis was present in all the patients selected, as was to be expected from their ages.

In addition to routine state hospital therapy, the patients received 25 mg. of testosterone propionate intramuscularly 3 times weekly for at least 12 doses. Those who failed to improve on this régime were then given 25 mg. 6 times weekly, in accordance with the finding of Hamilton[10] that such doses are sufficient for maintenance of urinary androgens in castrates at the average normal level. All patients received injections of normal salt solution before beginning testosterone.

The facilities of the hospital did not permit determination of androgen concentrations in the body fluids. The success or failure of the therapy, like the diagnosis and selection of the patients to be treated, was judged entirely by clinical observations.

The cases are described in detail in the next section.

REPORT OF CASES

Case 1.—(No. 16340) W. W. K. was born in 1884. His birth and early development were normal. He was well until the present illness, but was always retiring, dependent on his wife and reluctant to assume responsibilities. Following the death of his wife in 1936 he became increasingly depressed and inactive but continued to work as a bank teller. In February, 1940 he was promoted to a more responsible position, and promptly became dejected and bewildered. August 26, 1940 he was found toying with a revolver and was committed. On admission he was dejected, bewildered, restless, and nearly mute. Physical examination revealed hypertensive heart disease and oral sepsis. Laboratory studies revealed nothing of interest. No improvement occurred during the first 2 weeks of hospital treatment. The patient was then given 4 intramuscular injections of saline in a 10-day period without beneficial effect. Testosterone propionate in oil in 25 mg. doses was then given intramuscularly every second day for 3 injections. The patient became less depressed and much more communicative. Saline was substituted for the testosterone, without further improvement, for 4 injections. Testosterone therapy was then resumed 3 times weekly with progressive improvement until November 30, 1940. Ten days later the patient was paroled as recovered. He resumed his work at the bank and has remained well to the present time.

Case 2.—(No. 16500) J. F. was born in 1873. His birth and early development were normal. He was well until 1929, when he was first admitted to Springfield State Hospital because of failing memory, insomnia, and irritability. He improved rapidly and was paroled after 6 weeks with a diagnosis of psychosis with cerebral arteriosclerosis. He was readmitted, December 13, 1940, with a history of confusion, insomnia, mutism and forgetfulness during the preceding 2 weeks. He was found to be depressed, agitated, resistant, delusional, hallucinated. He mumbled about people being tortured, starved and killed. He refused food on the ground that others needed it more. Physical examination revealed undernutrition, arteriosclerosis, tremors and weakness. The results of laboratory studies were essentially normal. The patient remained unchanged during the first 2 months of routine hospital treatment. Intramuscular injections of saline were then begun and given 3 times weekly for 1 month without improvement. Testosterone propionate in oil in 25 mg. doses was then substituted for the saline. After the fifth injection of testosterone a rapid improvement began. The patient began to gain weight and strength and ceased to be agitated or depressed. After the twelfth injection he was in good spirits and fully recovered except for persistent sensorium deficits due to the cerebral arteriosclerosis. After 6 weeks of treatment he announced with great pleasure the return of libido and potentia. Endocrine therapy was discontinued after a total of 675 mg. of testosterone had been administered. The improvement has been maintained to the present time.

Case 3.—(No. 16601) G. S. was born in 1882. The family and past histories are noncontributory. The patient has always been stubborn, meticulous and ambitious. About February, 1939, following the marriage of his daughter to an epileptic, the patient became agitated, depressed, and suicidal. After about 1 month he improved and was able to continue work as a carpenter and farmer. In August, 1940 he became unduly worried about financial affairs, increasingly agitated, depressed, and suicidal. He was admitted to the Springfield State Hospital, February 10, 1941, confused, tearful, hopeless, agitated, and expressing somatic complaints. Physical examination revealed arteriosclerosis, hypertension, and ataxia. The results of laboratory studies were normal.

Five days after admission the patient was started on intramuscular injections of saline, which were given 3 times per week for 1 month without benefit. Testosterone propionate in oil in 25 mg. doses was then substituted for the saline. After 5 weeks the medication was given 6 times per week. After the fifth injection of testosterone the patient became much less agitated and tearful and was able to work fairly well on the ward. However, the apprehension and occasional crying spells continued. In all, 48 injections of testosterone, totalling 1,200 mg., were given. On July 6, 1941 the patient was paroled, much improved.

Case 4.—(No. 16620) J. R. M. was born in 1885. One maternal uncle was psychotic. The patient worked successfully throughout his adult life as a pharmacist.

He was always well and was an energetic, popular, good mixer until the present illness. In September, 1940 he was arrested for failing to support his father. He was reprimanded by the judge and thereafter became depressed, self-accusatory, agitated and convinced that a mistake in filling a prescription had caused the death of a woman. He was admitted to a private sanitarium, November 4, 1940 and transferred to the Springfield State Hospital, unimproved, February 18, 1941. Here he was agitated, depressed, self-accusatory and convinced that his bowels were stopped up. Physical examination revealed undernutrition, tremors, hypertension and arteriosclerosis. The results of laboratory studies were normal. Three weeks after admission intramuscular injection of saline thrice weekly was begun. After 1 month, testosterone propionate in oil in 25 mg. doses was substituted for the saline. After 7 injections the dosage was increased to 25 mg. 6 times per week until a total of 40 injections, or 1,000 mg., had been given. No change in the patient's condition resulted.

Case 5.—(No. 16721) L. S. was born in 1891. He completed the third grade of public school and thereafter worked successfully as a farmer and miner until the present illness. Throughout his life he was somewhat timid, retiring and inclined to worry, but he was able to make a satisfactory adjustment with the help of his wife. In November, 1940 his wife developed pneumonia. A few days later the patient fell to the floor as if paralyzed. Thereafter he was inactive, depressed, bewildered, and unable to eat or sleep. He complained of auditory and visual hallucinations and expressed suicidal preoccupations. He was thereupon admitted to the Springfield State Hospital, April 5, 1941. Physical and laboratory examinations revealed nothing of interest. Two weeks after admission intramuscular injections of saline were begun and were given 6 times per week. After 25 such injections testosterone propionate in oil in 25 mg. doses was substituted for the saline. Twenty-seven injections of the hormone, totaling 625 mg., were given without improvement.

Discussion

It is obvious that the present series is too small to permit of more than very tentative conclusions, and that even if our cases are grouped with those reported in the literature cited above, the number would be without statistical significance.

It is to be noted, however, that the patients who recover under treatment do so as if they were responding to the hormone. Thus, they begin to improve after the first few injections, as if they were receiving specific therapy. It is possible that such cases, although clinically identical with those who fail to recover, differ from the others in some more subtle way as yet undiscovered. A similar conclusion was implied by the study of the estrogen therapy of menopause psychoses.

While the results with androgen therapy are not more striking than those reported for metrazol, the simplicity and safety of hormone therapy are important advantages. It appears to us that the results in this preliminary series are sufficiently encouraging to justify further trials.

Summary

Five men believed to be suffering from involutional melancholia have been treated with testosterone propionate after a preliminary course of placebo. Two recovered from their depressions and 1 other improved sufficiently to be paroled. It is believed that the results justify further study.

N.B. The testosterone propionate used in this study was kindly furnished by Dr. Edward Henderson, Schering Corporation, Bloomfield, N. J.

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OFFICE GYNECOLOGY*

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THE three outstanding symptoms which bring the patient to the gynecologist are pain, vaginal bleeding and leukorrhea. This evening I shall deal with these problems only in so far as they concern the cervix. Cervical pathology is frequently the cause of pelvic pain and vaginal bleeding, and it is the most common cause of chronic vaginal discharge.

TREATMENT OF CERVICAL LESIONS

Most cervical pathology is the direct result of the trauma of childbirth. The passage of the child through the ring of thinned out cervix at the end of the first stage of labor inevitably results in macroscopic or microscopic lacerations. These lacerations usually extend laterally, due to the fact that the cervix is more firmly fixed laterally and therefore offers more resistance to the passage of the head. As a result of these injuries, the postpartum cervix frequently does not return to normal. Careful inspection of the cervix 5 or 6 weeks after delivery will often reveal *lacerations*, *erosions*, *eversions*, and *elongation of the anterior lip*. Infection of the lacerated and eroded cervix is inevitable and is soon followed by leukorrhea, pelvic pain, backache and menstrual disturbances.

No postpartum examination should be considered complete without careful inspection of the cervix and immediate correction of any pathology which may be found.

Years ago silver nitrate was used for the correction of erosions and eversions, later the actual cautery replaced the silver nitrate, but in recent years, the electric cautery has been made available and has proven so satisfactory that the correction of mild or moderately severe cervical erosions and infections has become a simple office procedure.

Pathology of the cervix may be due to a variety of causes other than childbirth. Some of the more common causes are strong douches, contraceptives, abortions, the use of ill-fitting pessaries, and venereal infection. Not infrequently we find erosions in nullipara and occasionally in virgins. These may be of congenital origin.

The postpartum cervix which shows only a mild gaping and a slight erosion should be treated either by striping with the actual cautery or the knife blade of the electrocautery, or by coagulation of the surface by the ball type electrode of the electrocautery. This results in destruction of the tissue to the depth of about $\frac{1}{8}$ inch and destroys the glands in that area. The shrinkage of the scar tissue which results causes the lips to reinvert and corrects the eversion.

When the erosion is accompanied by chronic infection, the condition will recur unless the discharge is eradicated. To do this, the infected glands of the cervical canal are coagulated with the bipolar electrode of the electrocautery.

If the condition is of long standing and is deep-seated, as indicated by the enlargement of the cervix, the presence of numerous cysts and the history of chronic leukorrhea, surface coagulation of the canal will not reach the infection in the deeper glands. In order to correct such a condition, conization must be done.

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* Discussion of Dr. I. C. Rubin's paper, "Office Gynecology," at Postgraduate Course in Office Surgical Procedures and Psychoneuroses, held at the Society's building, March 24, 1941.

Conization of the cervix is a simple office procedure. There are very few pain fibres in the cervix, so that the patient is only aware of a slight feeling of warmth. If a nervous or apprehensive patient is encountered this sensation may be relieved by the insertion of an applicator soaked in 20 per cent cocaine into the cervical canal. Then, with the cutting current turned on, the pole of the cautery is inserted into the canal, the wire cutting its way into the tissue at about 12 o'clock. When the base of the wire reaches the external os, the loop is rotated through 360 degrees. This results in the coring out of the entire gland-bearing area of the cervical canal, together with the eroded area on the surface of the cervix.

Bleeding is usually slight, but occasionally may be severe. Usually it can be controlled by coagulation of the bleeding points either by touching them directly with the cautery tip, using the coagulation current, or by grasping the points with a hemostat, and touching the handle of the hemostat with the electrode. If neither of these are effective, the coned-out area may be packed tightly with sterile gauze.

Because lacerations usually extend laterally, and because the blood supply of the cervix enters through the bases of the broad ligaments laterally, it is extremely dangerous to attempt to treat extensive lateral lacerations by conization in the office. If the laceration extends more than ½ inch from the external os, it is probably better handled in the hospital by tracheloplasty and trachelorraphy.

Conization should never be attempted in the presence of acute infection. It results in a dispersion of the infection to the broad ligaments, to the peritoneal cavity, and even to the blood stream, and may result in abscess formation, peritonitis or septicemia.

Conization should be avoided premenstrually, as the bleeding is more severe at this time. Following conization of even extensive erosions it is amazing how the cervix will return to almost nulliparous appearance. Occasionally the shrinkage may be so extensive as to result in stenosis and require dilatation of the canal.

Variously sized cones of tissue may be removed by using the different size Hyams or Cherry conization electrodes. It is usually wise to select an electrode which goes well beyond the eroded area. This is especially true if one wishes to examine the tissue microscopically, since the current destroys the morphology of the tissue which the electrode traverses to the depth of about an eighth of an inch.

Care must be taken in all of these electrocautery procedures to avoid contact with the vaginal mucosa. Painful burns may result from accidental contact with the mucosa. The same result may occur if the electrode touches the vaginal speculum, transmitting the current to the mucosa. To avoid this, the lips of the speculum should be inserted into a piece of inner tube. This insulates the mucosa and at the same time holds the side walls of the vagina out of the way.

I have found the spark gap type of electrocautery to be superior to the tube type in these procedures. The spark gap current receives more "damping," resulting in a larger amount of coagulation when the cutting current is used and better hemostasis.

Cervical polypi are small red sessile growths which protrude from the cervical os. Usually they are characterized by bleeding, but they may be symptomless. Microscopically, they are composed of either endocervical or endometrial tissue, depending on their point of origin. They may be removed either by the snare, the cautery, or by twisting off. Probably the easiest office procedure is to grasp the polyp with a uterine dressing forcep and twist it off and then to coagulate the base with the actual cautery or the endocervical bipolar electrode of the electrocautery.

Nabothian cysts are retention cysts of the cervical glands, usually resulting from the edema and scarring of chronic infection. They are usually small multiple vesicles containing clear mucoid material, but they may be so large as to encroach on the cervical canal. The cysts may be individually treated by incision and chemical cauterization or by curettement of the cyst cavity, but the simplest method is to cauterize the entire cyst by inserting the needle point electrode into the cyst and turning on the current. The current boils the cyst fluid, effectively sterilizing the contents and destroying the lining membrane of the cyst. If numerous cysts are present, conization of the cyst-bearing area offers the best hope of permanent cure. Single large cysts should be incised and their lining membrane either curetted or cauterized with phenol or actual cautery. Unless the entire lining of the cyst is destroyed, recurrence is inevitable.

Pedunculated fibroids may sometimes be seen protruding from the cervical os. If these are small, they may be pulled down through the external os and removed either by twisting, by the use of the cautery loop, or by means of the snare. If they are larger, care must be taken in their removal, for they sometimes pull the fundus down with them and an incision into the base may open the peritoneal cavity.

Early carcinoma of the cervix is so difficult to recognize, even in the hands of experts, that all suspicious areas should be subjected to biopsy. The classical description of a small indurated ulcer that bleeds on touch may easily be simulated by a simple erosion. Schiller's test is of little value in the differential diagnosis, because only the glycogen-containing cells take up the iodine. Since neither carcinomatous areas nor eroded areas show any staining, the test is of little value in differentiating the two. Microscopic examination is the only accurate method.

The biopsy is easily obtained either by the biopsy punch or the ring electrode. If the tissue is pedunculated, a snare may be used. In using the cautery loop, care must be taken to go well outside the suspicious area so as not to coagulate the tissue which you wish to examine.

THE ENDOMETRIAL BIOPSY

Tremendous advances have been made in the knowledge of female sex endocrinology, and a vast number of potent endocrine products are available for therapeutic use. It is essential that every practitioner who treats functional menstrual disorders and sterility be able to make an accurate estimate of the character of glandular function in these cases.

The endometrial biopsy is at one time the simplest and the most accurate means of determining the state of ovarian function. It has the advantage over other methods in that it is a simple office procedure which requires no extensive laboratory equipment or biologic assay and the results can be obtained within a few days' time. Furthermore, the results indicate the physiologic activity of the hormones in the body rather than the quantitative levels obtained by bio-assay which may have wide variations within normal limits.

Method. There are several types of biopsy curettes, but that devised by Novak has proven eminently satisfactory. Suction is not necessary. The taking of the biopsy is an office procedure which causes only transitory abdominal cramps and therefore requires no anesthesia. The patient is placed in the lithotomy position, and a vaginal speculum is introduced. The cervix is cleaned with a dry sponge and then painted with an antiseptic. The cervix is grasped with a single-toothed volsella and gentle traction exerted to bring the cervical and uterine canals in a straight line. The curette is then introduced as high up on the uterus as possible, and then gentle pressure is applied at the same time that the curette is brought downward.

The endometrium does not respond as a whole to hormonal stimulation. That high up in the uterus usually shows most advanced and complete growth while that near the cervix may show little or no reaction. To insure that the specimen obtained will give an accurate picture, it is well to make 4 downward strokes from as high up in the uterus as possible, 2 on the anterior wall and 2 on the posterior wall, being careful to relieve all pressure before the internal os is reached. The specimen is then fixed in 10 per cent formalin and is ready for the usual preparation for microscopic study.

Time of taking the biopsy. An endometrial biopsy is absolutely worthless from a diagnostic standpoint unless accurate dates of the preceding and following menstrual cycles are known. The specimen should be obtained 2 to 3 days prior to the onset of the menstrual flow. In cases in which there are marked irregularities and this timing is impossible the biopsy may be taken 22 to 26 days after the last period. If the flow does not occur within 5 to 7 days thereafter, the biopsy must be repeated until one is obtained just prior to the flow. In cases of amenorrhea and those of prolonged bleeding, a biopsy should be taken every week for several weeks.

The normal endometrial cycle. While the monthly cycle of endometrial growth does not consist of well-defined stages but presents an orderly continuous process, for purpose of identification it may be divided into the follicular and the secretory phases.

In the follicular phase the glands are straight tubular structures with no evidence of secretory activity. This phase of the cycle is completely controlled by the follicular hormone, estrogen, and the only change in morphology is that of growth.

In the secretory phase the glands are tortuous and enfolded and show marked secretory activity. This phase is dominated by the corpus luteum hormone, progesterone.

Pathologic endometria. An endometrium to be diagnosed as pathologic may vary from the normal in one of two ways: (1) The histology of the phase of the endometrium may be apparently normal, but the time of occurrence in the menstrual cycle does not conform to that of the normal, producing the delayed or persistent phases; and (2) the structure of the endometrium may be pathologic. Both types represent disturbances of the hormonal mechanism of the cycle.

In the *atrophic follicular type* only fragments of the epithelium are obtained which contain a few small follicular glands. An atrophic follicular endometrium represents the most profound type of ovarian failure, since in such a case there is not only an absence of corpus luteum function, but a failure of the follicular hormone also.

In the *persistent follicular type* a follicular reaction is present when normally luteal differentiation should have occurred. A persistent follicular phase is interpreted to mean absence of corpus luteum function, and probably absence of ovulation.

In the *cystic follicular type* the glands are of the follicular type and show marked irregularity in size and shape, many being dilated to the point of cyst formation. This is the "Swiss cheese" endometrium. This represents absence of ovulation over a long period of time with a state of relative hyperestrogenism.

In the *delayed post-ovulatory type* subnuclear vacuolization is the predominant characteristic. The occurrence of this type of endometrium may be interpreted as indicating that ovulation has just occurred or that ovulation occurred at the expected time but was not followed by sufficient corpus luteum function to carry the endometrium through its normal secretory cycle.

In the *mixed type of endometrium* glands of both follicular and secretory types are found. A mixed type of endometrium indicates corpus luteum failure, with certainly a deficiency of progesterone and probably a disturbance in the estrogenic activity.

In the *hyperplastic secretory type*, occasionally encountered, the glands are larger than normal, with excessive proliferation of the epithelium resulting in marked and rather bizarre infolding of the epithelium. Since the proliferation of the endometrium is accomplished by estrogens, excess growth would seem to be due to excessive quantities, either absolute or relative, of this hormone.

In the *hypoplastic secretory type* the hypoplasia of the luteal phase exhibits glands which are fewer than normal, are small, and show very little secretory action. Hypoplasia represents a deficiency of both hormones in the secretory phase and possibly a deficiency of the preceding follicular function.

Clinical application. There is no specific endometrial pattern for each of the functional menstrual disorders or sterility and in turn each of these clinical manifestations of ovarian dysfunction may exhibit any one of the endometrial patterns as an indicator of this dysfunction. For this reason there is no specific form of therapy for any one of these clinical syndromes. A few examples will clarify this.

In cases of *sterility*, when all other factors as organic pelvic pathology, closed tubes, and male incompetency have been ruled out, there still remains a group of patients who do not become pregnant because of disturbance of endocrine function. An endometrial biopsy will serve to clarify the problem and indicate the form of therapy which is necessary. The finding of a premenstrual follicular endometrium indicates that the woman is not ovulating, although her periods may be regular. Therapy in such cases must be directed toward producing ovulation by the use of one of the gonadotropic hormones. Progesterone will be of no avail because pregnancy is, not possible without ovulation, and progesterone does not effect ovulation. On the other hand, if an abnormal secretory endometrium is found, it may be inferred that ovulation has occurred but that corpus luteum function sufficient to prepare the endometrium for nidation and for the maintenance of pregnancy has not developed.

Dysmenorrhea, the bugbear of gynecologists, responds very poorly to glandular therapy when applied indiscriminately. On the basis of pelvic findings and endometrial studies, cases may be divided into three therapeutic groups: (1) small hypoplastic uteri with a deficiently developed endometrium which respond to estrogenic hormone, (2) well developed uteri with secretory endometria which respond to progesterone or androgen therapy, and (3) pelvic congestion with a normal endometrium in which no glandular therapy will be helpful.

Functional bleeding and follicular cystic hyperplasia were formerly considered synonymous. This is now recognized as false. Excessive bleeding may occur from any type of pathologic endometrium, atrophic follicular to hyperplastic secretory as well as from the typical "Swiss cheese" type.

And so, one could go on with all the functional disorders. The important point is that each case which presents itself is not a clinical entity which may be treated routinely but is an individual problem which must be studied carefully and completely before any kind of therapy is applied. Failure to do so accounts for much of the failure which has been chalked up, unfairly, against endocrinology. The endometrial biopsy is a simple office procedure which anyone can use. It will give the clinician a fair estimate of the character and degree of ovarian function, thus enabling him to treat his cases rationally and with more hope of success.

Outlook for mumps control improved. An outbreak of mumps in a military establishment may lead to serious consequences in the way of days lost through hospitalization, CONRAD WESSELHOEFT, M.D., late Captain, Medical Corps, United States Army, Boston, and CHARLES F. WALCOTT, M.D., Major, Medical Corps Reserve, United States Army, Cambridge, Mass., declare in the current issue of *War Medicine,* published April 15, 1942 by the American Medical Association in coöperation with the Division of Medical Sciences of the National Research Council. Present day basic knowledge of the nature of this disease and an understanding of how some of its manifestations can be alleviated and its spread prevented, should enable one to cope with it more successfully than in the past, the two men say.

PALINDROMIC RHEUMATISM

Report of Two Cases

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RECENTLY Hench and Rosenberg[1] described a form of arthritis which they called palindromic rheumatism that is characterized by frequent attacks of severe joint pain of sudden onset. Associated with the pain is swelling, redness, tenderness, and local heat. These cases all show normal hematologic features and roentgenograms, and the attack subsides so rapidly that within an hour to several days the affected part has returned to normal. Thirty-four such cases were reported as having been seen at the Mayo Clinic.

Many such cases probably exist; and because no one has observed that they fit into a definite class, they have undoubtedly been recorded as examples of "chronic arthritis" with its attendant sad prognosis. The proper classification in the future is important, since it seems immediately to change the outlook of the patient from one of despair to that of philosophic endurance. Two cases are reported which seem to fall into this new group in every respect.

Case 1.—C. G., aged 23 years, a farmer prior to enlistment, was admitted to the hospital, January 11, 1942, 7 days after induction into the Army, complaining of pain and slight stiffness in the right knee of 3 days' duration, and a "head cold" of 4 days' duration. He did not appear to be acutely ill. On the day of admission to the hospital the knee became acutely inflamed, swollen, and increasingly painful. No other joints were involved. The patient had had measles, pertussis, mumps and chicken-pox as a child. Since 1937 he had had more than 100 attacks such as the present. They lasted from an hour up to 10 days, but never any longer and left him perfectly well and free from discomfort or disability until the next attack, which might come on at any time. The average attack lasted about 2 days, and usually only 1, sometimes 2 joints were involved. Practically all joints had been involved at one time or another, but most frequently the knees, ankles and elbows had been affected. There was no history of renal colic or olecranon bursitis. The large toe had never been affected. The father and paternal grandmother have "rheumatism."

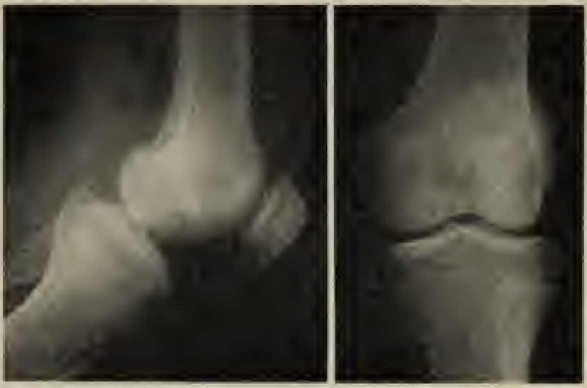

Fig. 1. Case 1. Right knee during the acute stage.

The patient was fairly well developed and nourished. The head and neck showed slight nasal and pharyngeal injection. The tonsils were present and slightly inflamed; pressure did not produce any caseous material. The teeth were all present, and a few were carious. The ocular fundi were normal. The thyroid was not palpable. There was no adenopathy. Tophi were not present. The chest was clear in all areas. The heart was normal as to size, shape, rate and rhythm; no significant murmur was noted in any area. The blood pressure was 130/70 in both arms. Examination of the abdomen did not reveal tenderness, rigidity or palpable masses. The genitalia were normal. Prostatic examination and smear elicited no evidence of abnormality. The right knee was swollen, considerably reddened, hot, and tender on pressure; a suggestive evidence of fluid was noted. No subcutaneous nodules were present. The muscular system was negative except for possible hypotonia. The reflexes were physiologic. The dental examination did not reveal any possible focus of infection. X-ray films of the sinuses showed slight opacity of the left antrum. Ear, nose and throat consultation substantiated the physical findings of the nose, throat and sinuses. Roentgenograms of the involved knee showed no evidence of arthritis or of any abnormality (fig. 1). The previously involved joints were X-rayed and reported as showing no evidence of disease. A hemogram showed 4,500,000 red blood cells per cu. mm. of blood with 85 per cent hemoglobin; the white blood cells numbered 12,300, with 71 per cent polymorphonuclears, 17 per cent lymphocytes, 7 per cent basophils, 3 per cent eosinophils, and 2 per cent monocytes. The urinalysis was normal. The blood uric acid was 3.5 mg. per 100 c.c. of blood. The sedimentation rate during the attack was 7 mm.; after subsidence of the attack it was 6 mm.

The patient was immediately put to bed but no medication given. The complaints completely subsided within 36 to 48 hours. Within 48 hours the knee appeared normal in every respect, there being no reddening, swelling, tenderness, stiffness or pain. The white blood cells then numbered 6,800, with 75 per cent polymorphonuclears, 20 per cent lymphocytes, 3 per cent monocytes, and 2 per cent young forms. The temperature returned to normal in 36 hours after admission and remained so, the highest having been 99°F. on admission. The nasopharyngitis cleared completely. The patient remained in the hospital from admission until February 6, 1942, without any recurrence of his complaint. He was discharged from the hospital in good condition.

Case 2.—D. B., aged 28 years, a locomotive fireman prior to enlistment, was admitted to the hospital, March 19, 1942, complaining of pain in the right ankle and the knuckles of the right hand of 2 days' duration. He did not appear to be acutely ill. The present illness had come on suddenly about 48 hours before, following exposure to cold and damp weather with associated excessive exercise. There had been no serious illnesses. The usual childhood diseases had occurred. Tonsillectomy had been performed in 1933. Gonorrhea with adequate treatment had occurred in 1930. For the previous 7 years he had had many attacks similar to the present, and these attacks had usually come on suddenly, affected various joints, and lasted from 1 to 10 days, the average attack lasting 36 to 72 hours. These attacks were usually precipitated by a mild upper respiratory infection, exposure to cold or damp weather, or sudden changes in the weather. Following these attacks, there had not been any residual complaints, and full duty was resumed. Usually only 1 joint was involved at a time, but sometimes 2 or more joints were involved at the same time. There was no history suggesting renal colic, nor any history of olecranon bursitis. The big toe had never been involved. During the preceding 7 years more than 100 attacks had occurred. The mother had "arthritis."

The patient was very well developed and well nourished. The skin was clear and showed no evidence of abnormality. The head and neck were considered negative, the tonsils having been previously removed. The teeth were apparently in good condition, and the nasopharynx did not show any evidence of inflammation. The ocular fundi were normal. The thyroid was not palpable. No adenopathy was noted. There were no tophi. The lung fields were clear in all areas. The heart was normal as to size, shape, rate and rhythm, there being no significant murmurs in any area. The blood pressure was 125/75. Examination of the abdomen was negative. The external genitalia were normal. The prostatic examination and smear were negative. There was a marked swelling with tenderness and redness on the medial aspect of the right ankle. The metacarpophalangeal joints of the right hand also showed moderate swelling, tenderness and redness. Local heat was noted in all affected joints. There were no subcutaneous nodules present. The muscular system was normal. The reflexes were physiologic. Dental consultation with X-ray films of the teeth was reported negative. Ear, nose and throat consultation with X-ray films of the nasal sinuses revealed no evidence of abnormality. A roentgenogram of the acutely involved joints showed no evidence of any arthritic change. Films of previously involved joints were also reported as being negative. A hemogram showed 5,110,000 red blood cells per cu. mm. of blood with 90 per cent hemoglobin; the white blood cells numbered 11,200 with 69 per cent polymorphonuclears, 26 per cent lymphocytes, 2 per cent monocytes, and 2 per cent eosinophils. The urinalysis was normal. The blood uric acid was 3 mg. per 100 c.c. of blood. The sedimentation rate was 8 mm. in 1 hour.

The patient was immediately put to bed but no medication was ordered. The joints were heavily wrapped with cotton. The complaints completely subsided within 18 hours. Within 24 hours the involved ankle and joints of the hand appeared normal in every respect. The patient was able to use these parts without any discomfort. A hemogram done at this time was substantially the same as on admission. The sedimentation rate showed 5 mm. in 1 hour. Within 12 hours the temperature, which had been 99.2°F., returned to normal and did not become elevated again. The patient re-

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Editorials

MOBILIZING MEDICAL MANPOWER

As the tempo of the world-wide conflict accelerates, the grim reality of the war is being brought forcefully home to all our citizens. Those who have deluded themselves that "business as usual" would be possible have had a rude awakening for it is now clear to everyone that we will all share the burden in this war as in no other.

Upon physicians has fallen the responsibility of mobilizing the medical manpower of the nation. It is a stupendous task which will require resourcefulness, courage and good judgment. No such large scale mobilization of the profession has ever been undertaken and its success will depend upon the willingness of the individual physician to coöperate with his fellows in a common effort.

Nearly all physicians are now familiar with the duties of the Procurement and Assignment Service and know that through this agency medical personnel is provided the Army, the Navy, the Public Health Service, Civil Service, industry, and civil practice. Needs of the armed forces, of course, come first. As Lt. Col. Sam F. Seeley, Executive Officer of the Procurement and Assignment Service, stated in a forceful address before the Medical Society of the District of Columbia on April 29, 1942, 16,000 physicians will be needed in various branches of the military services before the end of 1942. Other branches of Government service must also be supplied with doctors. Not of least importance by any means are the needs of the industrial workers, and finally there is the civilian population which must not be neglected.

Most of the medical personnel assigned to other than civil practice will come from the larger cities. Washington has already supplied 120 physicians to the armed forces. Many others will soon be ordered to duty. Because of the unusual situation which exists in the District the number of physicians who can be released for other than military service is doubtful. The vast influx of war workers has increased the population of Washington from 631,464 in 1940 to an estimated 800,000 at present. This, of course, does not include the rapidly growing area in states adjacent to the District. The necessity of providing these workers with medical care is obvious. What proportion of physicians will be needed in civil practice remains to be determined. It is hoped that the answer to this question will be found in the registration held on May 12.

With full knowledge of the local medical needs, the profession will be in a far better position to fulfill its obligations to the nation as well as to the community.

CHEMICAL TESTS FOR ALCOHOLIC INTOXICATION

Maurice O. Eldridge, Assistant Traffic Director for the District of Columbia, stated recently that drunken driving is one of the most serious of our present-day traffic problems. He pointed out that 57 per cent of those arrested in the District during the fiscal year ending June 30, 1941 for driving under the influence of intoxicating liquor had been involved in accidents, yet only 40 per cent were convicted of that offense.

Police all over the country have had trouble proving that obviously guilty drivers were under the influence of intoxicating liquor. Possibility of illness, taking of medicine, and injury in the accident are acceptable explanations which permit the guilty to go free.

The solution of this problem lies in chemical tests of blood, urine or breath which show definitely whether there is sufficient alcohol in the blood stream and brain to cause intoxication. Their use eliminates guesswork by proving beyond question whether a drinking driver has accumulated enough alcohol in his system to be legally under its influence.

It is common knowledge that chemical tests measure the alcohol accumulated in the system, rather than the amount consumed. Persons who can "hold their liquor" show lower percentages of alcohol after drinking the same amount than less tolerant persons. Thus chemical tests are a good measure of the degree of intoxication.

The reliability of such tests for enforcement purposes has been recognized by leading national organizations including the American Medical Association, the Federal Bureau of Investigation, the International Association of Chiefs of Police, and the National Safety Council. A committee of the American Medical Association* has stated: "The medical profession is particularly fortunate in having these chemical tests at its disposal. They will enable the profession to avoid the well known disagreement of experts. Their use is recommended whenever physicians are called on to diagnose the degree of alcoholic influence for city and state enforcement departments."

Experience with tests in Cleveland, Milwaukee, Kansas City and Cincinnati proves that adoption of a chemical testing system increases convictions for the offense from 25 to 100 per cent. At the same time, chemical tests also free many innocent drivers who actually are ill, or stagger because of injury in an accident. A nationwide survey made by the National Safety Council shows that chemical tests were used in more than 30 states during 1940 for enforcement purposes, and that "drunken driving" convictions per 100,000 population were, on the average, 50 per cent greater in cities using such tests than in those relying on usual observation methods only.

Legislation now pending before Congress would authorize the use of chemical tests in the District of Columbia to supplement the usual police examinations of drivers suspected of being under the influence of intoxicating liquor.* Adoption of this legislation would be a tremendous forward step in the control of drunken driving in the District.

Legislation dealing with evidence obtained through chemical tests for intoxication has already been adopted in the states of Indiana, Maine, New York and Oregon. In the first three of these states the legislation provides that concentrations of alcohol in the blood stream in excess of .15 per cent by weight are prima facie evidence that a driver was under the influence of intoxicating liquor. Alcohol concentrations between .05 per cent† and .15 per cent are to be considered as relevant evidence, but not given prima facie weight. Such figures, recommended by the American Medical Association and the National Safety Council and used by physicians, chemists, prosecutors and courts in many places throughout the country, should be accepted as the standard for interpreting results of chemical tests in the District of Columbia as well as in other places which are now just setting up a chemical testing system.

The tests can be made of either blood, saliva, urine or breath, and furnish results sufficiently accurate for enforcement purposes. Tests of blood are to be preferred, provided facilities are available for obtaining the specimens and making the tests.

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* J. A. M. A., 1939, 112, 2164.

* These tests would not be compulsory. Tests would be made only when drivers submit specimens voluntarily.

† .07 per cent in Maine.

Some have argued that chemical tests violate the constitutional prohibitions against self-incrimination. Supreme courts of at least two states,* however, have held that analyses of specimens obtained without compulsion are admissible, even though the suspects did not know why they were asked to give the specimens. Experience also shows that very few suspected drivers ever refuse to give specimens† since they are usually in a condition where they are anxious to prove their innocence.

Adoption of a system of chemical tests‡ in the District of Columbia would materially aid in the control of erratic and dangerous drivers, and contribute to the conservation of essential manpower, vehicles and tires in the present emergency.

O. B. HUNTER, M.D.

PERTINENT PARAGRAPHS

April Meetings There was an unusually large number of meetings during the month of April. This is often the case prior to the Annual Business Meeting. However, in addition, this year there was considerable activity relating to the war.

The following meetings were held:

April 1	Special Meeting of Society
	Section on Pathology and Laboratory Medicine
April 2	Committee on Cancer Control
	Advisory Committee to Social Welfare Organizations
April 6	Subcommittee on Finance, Annual Scientific Assembly
April 8	Committee on Military Affairs
	Subcommittee on Child Welfare
	Scientific Meeting of Society
April 9	Subcommittee on Scientific Exhibits, A.S.A.
	Section on Neurology and Psychiatry
April 10	Committee on Public Policy
April 13	Committee on Postgraduate Education
	Obstetrical Board
April 14	Advisory Committee to Social Welfare Organizations
April 15	Subcommittee on Child Welfare
	Scientific Meeting of Society
April 17	Committee on Public Policy
	Committee on Military Affairs
April 22	Scientific Meeting of Society
April 23	Public Meeting on Cancer Control
April 24	Committee on Medical Economics
	Joint Meeting of Committee on Public Policy and Subcommittee on Child Welfare
April 27	Executive Board
	Public Meeting on Child Welfare
April 28	Board of Censors
April 29	Section on Pathology and Laboratory Medicine
	Special Meeting of Society

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Postwar Medicine Editors of some medical journals are already beginning to think in terms of what is in store for medicine after the war. They admit that it is premature to do so but nevertheless they express views which are of interest to every doctor. For example, the Editor of *California and Western Medicine* has this to say:

> "The exigencies of modern day warfare, both at the front, and sometimes even in bombed civilian areas, are not such as make possible the carrying on of medical

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* State v. Duguid (Ariz.) 276, 72 PAC (2nd) 435, 1937; and State v. Morkid (Iowa), 286 N.W. 412 (J. A. M. A., 1940, **115**, 1828).

† A recent Iowa Supreme Court decision provides that refusal to provide a specimen for a test is an inference of guilt and can properly be commented on before the jury. (Iowa v. Benson, October 21, 1941.)

‡ More complete information on the various chemical methods for analysis, with data on the relative merits of the blood, urine, saliva and breath as test material, are contained in an article, "A Critical Survey of Various Chemical Methods for Determining the Alcohol Content of Body Fluids and Tissues with Their Physiological and Medicolegal Significance," by Walter W. Jetter, M.D. (Quart. J. Stud. on Alcohol, 1941, **2**, 512.)

service with all the facilities, conveniences and hospital accessories, usually in vogue, in and under peacetime environments and conditions.

"Consider, also, whether it may not be possible, should the armed forces need their services, that recent graduates may be called into service without intern training? Years ago, there were few of such internships, and yet the people lived!

"And if changes as have been outlined above could become operative, may it not be profitable for organized medicine to study plans whereby colleagues in military service—when they return from military duties—will have made available to them opportunities for 3, 6, 9 or 12-month refresher courses in medical schools, designed to permit them again to take up and with greater ease, the problems of civil practice?

"The Federal Government, during recent years, has been providing facilities and money grant-in-aid for analogous instruction to physicians who have been preparing themselves for public health work. When the war is over, a grateful Government might well consider a similar procedure, and reward the physicians who will have kept its armed forces fit for service at the front. To some readers, this may seem to trench somewhat into the domain of state medicine. If that be so, then organized medicine itself may wish to be called upon to provide the funds for such work. At the present time, who knows? Are not such postwar medical problems worthy of consideration?"

Taking another view of the situation, *Northwest Medicine* (April, 1942) directs attention to the conditions under which physicians may have to practice.

"Necessarily our status after the war will be largely dependent upon that of the world in general. It is inconceivable that a free profession could survive in a world governed by dictators. It is also quite out of the bounds of probability that a general system of free enterprise would tolerate in its midst a government-controlled practice of medicine.

"Whatever organization of society comes out of the present boiling cauldron of human affairs, there is one thing of which we may be certain. It is that there will be a wider and more equable distribution of the world's goods. This has been the trend since the Renaissance, obscured at times but nonetheless evident as a thread running more and more strongly through the fabric of world history. Nowhere has it been more evident than in our own country, where the working man now enjoys luxuries beyond the reach of the most affluent of a generation ago. The masses have found voice and power. They will use both after the war."

While nothing should divert us from the all-important task of winning the war, we would be negligent indeed if we did not take into account conditions which will undoubtedly exist in the postwar era. In so far as the medical profession is concerned, it should seek thoughtful and vigorous leadership.

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Liability of Medical Officers

Recently several physicians have called the Medical Society's office inquiring if it was necessary upon entering military service to carry malpractice insurance. The answer to this question has been in the negative. Although the physician is technically liable for damages, the Secretary of the Society, in discussing this matter with a high Army official, was informed that to his knowledge no medical officer carried malpractice insurance and that he did not believe it necessary.

In the September 13, 1941 issue of the *Journal of the American Medical Association*, there appeared an editorial on this subject. The *Journal* stated in part:

"Without doubt the same degree of care, diligence and professional ability required of any physician with respect to the care of patients in civilian life is required by law of a medical officer of the Army or of an examining physician for a local board in his care or examination of a member of the service or of a selectee called for the purposes of induction. For a departure from such standards resulting in harm to the patient the medical officer or the examining physician would be liable in a civil suit by the aggrieved patient the same as though both the patient and the physician were in civil life. The medical officer, then, in the Army and the physician acting for a local Selective Service board by virtue of his service or function stands in no different position with respect to answerability to his patients from that of a physician acting solely in a civil capacity.

"However, were a malpractice claim to be pressed against an army medical officer or an examining physician for a local board for alleged malpractice in the performance of his official duties the government itself would no doubt provide defense for the physician accused. It has been the practice of the Attorney General in the past to provide, on the request of an interested government department or agency, defense for government officers or agents in civil suits arising out of the activities in the course of the discharge of their official duties. A communication from the office of the Judge Advocate General of the Army dated May 1, 1941 indicates that in the past the War Department itself has not undertaken the defense of a civil suit for malpractice brought against a member of the medical corps but that the defendant medical officer has had the right to have the case removed to a federal court and to be defended by a United States attorney designated by the Department of Justice. If, however, according to this communication, a judgment was to be rendered against such a medical officer, there is no provision by law by which the judgment could be paid by the government or by which the defendant physician could be reimbursed by the government."

"While the defense measures indicated that will be available to medical officers and examining physicians for local boards will undoubtedly be helpful, physicians concerned cannot safely discontinue such forms of malpractice insurance protection as they previously have carried. In the communication previously referred to, the Judge Advocate General's office states that malpractice suits by persons in military service against members of the medical corps have thus far been quite rare. Therefore, since patriotic coöperation may be expected from all persons and corporations during the national emergency, especially favorable premium rates should be obtainable from insurance companies for policies to protect physicians in the service and local board physicians against claims for malpractice that may rise from the performance of their duties to the service and to the national government."

It will be seen from the above that the physician will have to exercise his own judgment but military authorities seem to agree that there would be a remote possibility that any physician would be placed in a position where he alone would be held responsible for treatment of an individual in the service.

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Dr. Lahey on Questionnaires

Those who know Dr. Frank H. Lahey, President of the American Medical Association, are familiar with his frankness in discussing current problems. Although he does not mince words, he is never unjustly critical. Some weeks ago, in an address before the New Orleans Graduate Medical Assembly (*New Orleans Medical and Surgical Journal*, April 1942) he took the profession to task for its attitude toward questionnaires sent out by the Procurement and Assignment Service. He said:

"Because there is a very distinct tendency on the part of doctors to be resentful of, and negligent with, questionnaires, it should be plainly stated that this questionnaire is not primarily for the benefit of the Government. It is preëminently for the benefit of the doctor, aimed as it is by means of the information obtained from it to get him into the place he can best occupy. It is striking evidence of the trust that is placed in him, on the part of the Government to be willing to let him do, without pressure, whatever he is best suited to do in this period of national need."

Certainly there can be no better argument for every physician returning his questionnaire.

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Notice to Group Hospitalization Subscribers

The following notice was transmitted by Mr. Joseph H. Himes, President of GROUP HOSPITALIZATION, INC., to the Society on April 24 with the request that a copy of the notice and acknowledgment of its receipt be forwarded to physicians subscribing.

"Doctors Hospital has served notice that it will terminate its contract with Group Hospitalization, Inc. as of March 31, 1943. This means that our subscribers may receive no benefits in Doctors Hospital after March 31, 1943, except in an emergency. In an emergency in which no facilities are available in any of the remaining eleven participating member hospitals, an allowance of $5.00 per day will be made to apply on the charges of Doctors Hospital for such period of time as the subscriber may be eligible.

"Group Hospitalization recognizes that the termination of its contract is a prerogative of the hospital, for the contract provides that it may be terminated by

> either party thereto on giving one year's notice; however, the Doctors Hospital, in giving its notice, added:
>
> > 'the Hospital will refuse to accept for admission Group Hospitalization subscribers whose contracts are written with you or whose contracts are renewed subsequent to March 31, 1942.'
>
> "We contend that all of our subscribers—current, renewed, or new—are entitled to full service under the contract at Doctors Hospital up to March 31, 1943. In behalf of our subscribers, we shall take such action as may be appropriate or necessary to require the hospital to comply to the fullest extent with its contract for service to our subscribers, even though this may require an appeal to the courts.
>
> "No subscriber's contract, current on March 31, 1942, will be affected until its expiration date; but, pending a final determination of the contractual liability of Doctors Hospital to our subscribers, we cannot assure service on any new or renewed contract after March 31, 1942.
>
> "Although each contract offers service only in the hospitals having contracts with us in force at the time the service is required, we feel, in view of this notice from the hospital and further, in order that we may know that our subscribers are fully advised, that it is desirable not to renew any contract unless the subscriber has signed the acknowledgment of the notice of the Doctors Hospital. This acknowledgment, therefore, should be signed and submitted to your group's treasurer at the earliest possible moment, because credit for payments in a new contract year may be held up pending receipt of the Acknowledgment of Notice."

Since the above notice was received, representatives of Group Hospitalization and Doctors Hospital have ironed out some of their difficulties, it being agreed that current, renewed or new subscribers will be admitted to the Hospital as previously. However, the contract between Group Hospitalization, Inc. and Doctors Hospital will terminate finally on March 31, 1943.

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Protecting Practices of Physicians in Military Service

On several occasions physicians have spoken to officers of the Medical Society of the District of Columbia suggesting that some plan be worked out to protect the incomes and practices of physicians ordered into military service. Obviously this would be a very desirable thing to do but study of the problem has revealed that it is not easily solved.

The experience of the Medical Society of the County of Westchester is undoubtedly similar to that of other medical organizations. In the March, 1942 issue of the *Westchester Medical Bulletin*, it is reported that the Medical Preparedness Committee of that Society has given a great deal of thought to this matter. In November, 1940 the Committee outlined a number of plans which it had studied, endeavoring to stimulate the interest of members in its proposals. However, there was no reaction in the form of constructive suggestions, or even an indication of preference or of interest on the part of any considerable number of members, and accordingly nothing has been done about this matter since that time. The situation has, of course, changed a great deal in a year and a half and the *Bulletin* therefore reviews a number of its original proposals. They were as follows:

> "(1) A plan whereby a physician going into military service will designate one or two of his colleagues to whom he wishes to have his patients referred, and this arrangement would be registered with the County Society. The substituting physician thereafter would attempt on his first contact with any new patient to determine whether this patient should be considered a patient of the absentee physician. If so, a separate account would be kept and 50 per cent of the fees derived from the care of such a patient would be deposited in a trust fund under the direction of a special trustee committee to be designated by the County Society. Of all such funds received for deposit the Trustee Committee would withhold 20 per cent in a special fund to the credit of the trustees themselves, to be disbursed at their discretion for special relief or assistance for the families of any absentee members of the Society, whether or not such absentee is participating in this plan.
>
> "The remaining 80 per cent of the funds received would be deposited to the credit of the absentee physician to be withdrawn on demand by the absentee or such other persons as he might designate. On conclusion of the war, any monies remaining in this special fund administered by the Trustee Committee would be returned to the physician from whose account they had been deducted. The County Society, itself, would undertake to finance the administration of this program.

"(2) A plan which would provide that a medical finance committee would be set up, either on a county-wide basis or in various localities, with a financial director or credit man in charge. All practicing physicians in the area would agree to turn over a certain percentage of their net income to a central fund. The amount to be turned over by any particular physician might or might not be determined by reference to his income tax return showing his professional income and expenses. Each physician in military service would supply proof of the amount of his income from government sources, this amount to be deducted from his net income figure as reported in previous civil practice. For each doctor in civil practice there should be allowed in addition to his net income the amount claimed for operating expenses. A formula would then be developed whereby the committee could use the funds obtained from men in civil practice to equalize the incomes not realized by men called for military service in such a way that the burden for all would be approximately equal.

"(3) A proposal under consideration is, that without establishing any central organization of administration or control, the Society might merely recommend that each individual physician make a personal agreement with a substitute physician or physicians, to whom he will attempt to refer his patients while he is away, the substituting physician to remit to the absentee physician half of the fees derived from the patients of the absentee physician. This plan might be carried out on a purely individual basis and with only the moral encouragement of the County Society.

"(4) A proposal, suggested by a member of the Society, and attracting favorable comment, is that local physicians in each community agree to set aside a certain proportion of their gross incomes in a fund to be distributed, according to a previously arranged formula, to the physicians who have left that community temporarily for military service.

This plan would require that the local physicians appoint a committee of two or three of their most respected colleagues, who would talk with each physician privately and obtain from him an approximate confidential statement of his average income. This information would not be publicized in any way. Each physician remaining at home would then send each month a check for perhaps 5 per cent of his gross income during that month to a bank which would be designated as trustee of the fund. The bank would mail a check to each man in service or to his family. Presumably, the bank would charge a small fee for this service."

While the above proposals are interesting, they would not seem practicable in an urban center the size of Washington. If any of our members have any suggestions to offer which in their opinion would prove satisfactory, officers of the Society would welcome them.

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Postgraduate Course in May

A course of unusual interest will be sponsored by the Medical Society's Committee on Postgraduate Education when it presents a POSTGRADUATE COURSE IN THE MODERN TREATMENT OF BURNS AND THE PREVENTION AND TREATMENT OF CHEMICAL CASUALTIES during the month of May. The first lecture will be given on May 18 by Comdr. E. Harvey Cushing, Medical Corps, United States Naval Reserve, formerly Assistant Clinical Professor of Medicine, Western Reserve University, and formerly special observer in England for the United States Navy, whose subject will be "The Modern Treatment of Burns." The second lecturer will be Dr. Leon Goldman, Assistant Professor of Dermatology, College of Medicine, University of Cincinnati, and Consultant in Chemical Warfare, Medical Division, United States Office of Civilian Defense, who will speak on May 25 on "The Prevention and Treatment of Chemical Casualties in Modern Warfare."

A special invitation is extended to all physicians and nurses connected with the Emergency Medical Service for Civilian Defense in the District of Columbia. However, all physicians not only in the District but in nearby Maryland and Virginia are invited to participate. There is no fee for this course.

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New Equipment for Medical Bureau

Because of the demand for MEDICAL BUREAU Secretarial Service, it has been found necessary to install additional equipment. This service, as most physicians know, is of the private wire type, where the doctor's telephone is connected by a special wire with the BUREAU switchboard. Calls are intercepted by the BUREAU when the doctor is not in his office.

At present all available lines are taken, there being 47 subscribers to the Secretarial Service. In addition there are extensions to five hospitals and one to the HEALTH SECURITY ADMINISTRATION.

The BUREAU is in a position to accept any number of subscribers for the Alternate Listing Service. This is the service where the physician has a special listing in the telephone directory under his home and/or office number—"If no answer, call MEDICAL BUREAU, Republic 6100."

The increase in the number of requests for information and names of physicians has reached such proportions that it has been necessary to rearrange the equipment now on hand so that the calls can be more expeditiously handled. Although the volume of calls now is extremely heavy, there will be further expansion of this service because the Society has been informed that more Government agencies will turn to the Society for information about physicians.

The BUREAU is an important cog in the District defense program, for by providing medical information it helps protect the health of individuals coming to Washington. It might be mentioned that the BUREAU has a direct line connecting it with the control center of the Office of Civilian Defense in the District.

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Figures Misleading

No argument has been more frequently advanced as proof of the need for radical changes in the distribution of medical service than the rejections for military service due to physical disabilities. In view of this, the following comment which appeared in the *Statistical Bulletin* of the Metropolitan Life Insurance Company for February 1942 is of particular interest.

"While no figures are yet available, or are likely to be for some time, as to current rejections for military service, the American people can definitely be assured that the charge sometimes made, that 45 per cent of our young men are physically unfit, is entirely unfounded. This figure, which is based on the very rigid standards of selection used while we were still at peace, is wholly misleading as an indication of the health status of our youth. The American people have been unnecessarily disturbed.

"By any reasonable standard, the rank and file of America's young men will be found to measure up to the hard tasks that lie ahead of them. When properly conditioned, they will be found superior in stamina and endurance to the forces of our enemies. Furthermore, the American people may be assured that our excellent medical facilities will be freely drawn upon to strengthen the young men in our armed forces and to keep them fit. While the new standards of medical selection will bring into the Army and Navy some men with minor physical defects, many of these defects will be corrected. Many young men previously rejected are undergoing treatment for defects disclosed by their selective service examination.

"But even more important, as a result of these examinations, official and voluntary health agencies are attacking such causes as poor nutrition which underlie many physical defects. This will advance our military effort by improving the health of our people, and especially of the workers who produce the materials for the men behind the guns."

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Organization Completed for the Assembly

The following appointments to subcommittees of the Committee on Arrangements for the 14th ANNUAL SCIENTIFIC ASSEMBLY, to be held at the Mayflower Hotel on September 29, 30 and October 1, 1942, have been presented to the Executive Board and confirmed.

ATTENDANCE AND PUBLICITY

Philip A. Caulfield, *Chairman*
Leo B. Gaffney, *Vice Chairman*
William A. Howard
Thomas E. Mattingly
Robert H. Detwiler
J. Ross Veal
J. Lloyd Collins
Thomas F. Collins
William J. Collins
Charles A. Finnigan
Emil J. C. Hildenbrand
Wilbur W. Martin

AUXILIARY LIAISON

Jesse T. Mann, *Chairman*
James C. Waters, *Vice Chairman*
J. Francis Warren
Edward B. Macon

BANQUET, LUNCHEON AND ENTERTAINMENT

Benjamin F. Dean, Jr., *Chairman*
W. Ross Morris, *Vice Chairman*
Frank A. Hornaday
James A. O'Keeffe
Herman S. Hoffman
John E. Everett
Neil P. Campbell
Harry Zehner
John F. Brennan
Paul N. Taylor
John A. Reed
Richard B. Castell
William W. Chase
Mervin W. Glover
Duane C. Richtmeyer
Arnold McNitt

FINANCE

Milton C. Cobey, *Chairman*
P. S. Constantinople, *Vice Chairman*
James E. Wissler
Edward M. O'Brien
Marshall deG. Ruffin

PAN AMERICAN EXHIBIT

Tomas Cajigas, *Chairman*
Walter Freeman, *Vice Chairman*
Garnet W. Ault
William M. Ballinger
Frank D. Costenbader
Henry L. Darner
James A. Dusbabek
Isadore Lattman
F. A. Martinez

PROGRAM

Hugh H. Hussey, *Chairman*
Harry F. Dowling, *Vice Chairman*
Wallace M. Yater
Bernard J. Walsh
B. W. Leonard
Roger O'Donnell, Jr.
Thomas Bradley
Robert J. Coffey

PUBLIC MEETING

Victor R. Alfaro, *Chairman*
Garnet W. Ault, *Vice Chairman*
Frank D. Costenbader
R. Lomax Wells

SCIENTIFIC EXHIBITS

Russell J. Fields, *Chairman*
Isadore Rodis, *Vice Chairman*
A. J. B. Connolly
Cecile Fusfeld
Alan F. Kreglow
Henry B. Gwynn
Alma J. Speer
Robert H. Groh
Michael P. DeVito
Daniel L. Seckinger
Ales Hrdlicka

WOMEN PHYSICIANS

Margaret M. Nicholson, *Chairman*
Mabel Grosvenor, *Vice Chairman*
A. Elizabeth Verder
Carolyn Pincock
Helen Gladys Kain
Inez Edith Wilber

MEMBERSHIP

The following applicants for membership were duly elected to membership at the business meeting, May 6, 1942.

Active Members

C. Willard Camalier, Jr., Emergency Hospital
Thomas A. Wildman, 3731 Morrison Street, N. W.
Eugene L. Willard, 2025 Eye Street, N. W.

Associate Members

Waldo Briggs Moyers, 3303 Perry Street, Mt. Ranier, Md.
Leonard G. Rowntree, National Headquarters, Selective Service System

The following applicants for membership will be voted on at the business session, October 14, 1942:

For Active Membership

Tilman Harrison Foust, University of Pennsylvania—1938
Frank S. Pellegrini, Georgetown University—1939

For Associate Membership

Edith H. Weigert, University of Berlin—1924

Recent changes in membership status:

Active to Life

William R. Moulden

Resigned

Associate Members

William Otis Bailey
E. Herbert Bauersfeld
Edward A. Krause
Stuart W. Lippincott
Thomas J. Ready

President's Page

IT IS YOUR PRIVILEGE

Although most of us have only begun to feel the impact of the war on our daily lives, we are inclined to be impatient with restrictions upon our usual mode of living. Sacrifices which we have made so far for victory have been small indeed. Rationing of necessities of life, for example, has for the most of us been only an inconvenience. Of course, acute shortage of vital goods for civilian use is inevitable, and it is to be expected that difficult days are ahead. But these demands will be met by us with fortitude, I am sure.

Just now the Government is calling upon all citizens to purchase War Savings Bonds in the amount of ten per cent of their incomes. Some will feel this an imposition in view of high taxes and innumerable campaigns for funds. But thinking citizens will not take this attitude, for the Government is only asking that we show our patriotism by loaning all that we can to support the war effort. It is therefore not only a duty but a privilege.

I am fully aware of the generous contribution which has been and is being made by physicians of Washington. They have given without stint of their professional services, even though their practices are more demanding than at any other time within memory. My hope is that they will be equally generous in subscribing to War Savings Bonds. Generally speaking, physicians are financially in a better position to do so than many of our citizens. This being true, more will be expected of them.

Let it not be said that physicians were among those who failed to take advantage of their opportunity to lend financial aid to their Government or that compulsory subscription became necessary due in any degree to their indifference. I appeal to the medical profession in the District of Columbia to join those more fortunately situated in placing all possible funds at the Government's disposal.

Henry R. Schreiber

War Section

Since publication of data concerning physicians in the military services in the March issue of the Medical Annals, the following Society members have been reported called to military duty: Francis C. Allman, Alfred E. Brigulio, Milton C. Cobey, Michael P. DeVito, Charles E. Fierst, Theodore C. C. Fong, Henry B. Gwynn, Alexander Halperin, Morris Kleinerman, Raymond Maret, William C. Meloy, William S. Miller, Joseph J. Mundell, John A. Reisinger, Floyd S. Rogers, Jr., I. Lewis Sandler, Saul Schwartzbach, Isidore Shulman, Joseph W. Stein, Francis D. Threadgill, William J. Tobin, Harry S. Weitzman, William A. Withers and J. Rogers Young.

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Since publication of the Office of Civilian Defense handbooks, "First Aid in the Prevention and Treatment of Chemical Casualties" and "Protection Against Gas," further experience has shown that the 2 per cent solution of hydrogen peroxide recommended for the treatment of eyes following Lewisite burns may be injurious if used undiluted. The Chemical Warfare Service now recommends a single instillation in the eyes of a 0.5 per cent solution of hydrogen peroxide as soon as possible after contamination with Lewisite. This solution may be prepared by diluting one part of a 2 per cent solution with three parts of water, or one part of a 3 per cent solution with five parts of water. The solution usually found in drugstores is the U. S. P. strength of 2.5 to 3.5 per cent hydrogen peroxide. A 0.5 per cent solution of potassium permanganate has also been found effective as an eye instillation following exposure to Lewisite.

In planning decontamination stations, the Medical Division, Office of Civilian Defense, recommends that provision be made near the entrance of the second or shower room for the irrigation of the eyes of contaminated persons. The schematic sketch of a decontamination station in the Office of Civilian Defense publications mentioned above shows the irrigation of eyes in the dressing room, whereas this should be carried out in the second or shower room before the bath is given. Delay until the casualty reaches the dressing room will result in more serious injury to eyes which have been contaminated with mustard or Lewisite.

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Regulations for the administration of the Blood and Plasma Bank Program of the Medical Division of the United States Office of Civilian Defense have now been prescribed, and funds are available for grants to assist approved hospitals in establishing blood and plasma banks. Only hospitals within 300 miles of the Atlantic, Pacific or Gulf coasts are eligible for such grants. After July 1, 1942, these geographic restrictions may be modified so that grants may be made to inland hospitals. Applications should be addressed to the Chief Medical Officer, United States Office of Civilian Defense, Washington, D. C.

Technical manuals on blood and plasma banks, prepared by the Subcommittee on Blood Substitutes of the Division of Medical Sciences, National Research Council are now available for distribution on request of any hospital to the Chief Medical Officer, Office of Civilian Defense.

The Red Cross has established eighteen donor centers in various parts of the country which are successful in obtaining an adequate supply of blood donors for military purposes. Blood for the production of dried plasma for Civilian Defense purposes will also be obtained from these sources.

Hospitals which establish their own blood and plasma banks with the financial assistance of the Office of Civilian Defense are advised to build up their reserves of blood and plasma by expanding blood collection from relatives and friends of patients who are to receive transfusions. A public campaign for volunteer donors which may compete with the work of the Red Cross should be avoided if possible. If public solicitation is necessary, hospitals should appeal to the local chapters of the American Red Cross for assistance in recruiting hospital donors. Blood donor campaigns by agencies other than the Red Cross will tend to confuse the public and may interfere with the blood collection by the Red Cross for the armed forces.

ANNUAL REPORT OF WOMAN'S AUXILIARY

The Woman's Auxiliary to the Medical Society of the District of Columbia realized that due to the national emergency, the year 1941–42 would be one of the most, if not the most important year since its organization. Therefore, it was felt that an intensive membership drive should be started immediately. We are very proud to report that this drive was a huge success, bringing in 103 new working members. This number exceeds by far any new membership for a single, previous year, the active members now totaling 328 and associate members, 35.

Along with every other organization, our Auxiliary has been called upon for a great deal of defense work. During the Red Cross membership drive, our chairman collected over $1,700. The membership has contributed over 8,000 hours in rolling bandages, knitting, sewing, etc., for the Red Cross. Members have also prepared themselves for assistance in the defense work of our country by taking all types of courses given by the Red Cross and other organizations.

We have not participated much in Health Defense work. This is being carried on very ably by the Medical Society of the District of Columbia and other health groups.

Our Philanthropic Committee followed its usual program, filling stockings for underprivileged children at Christmas, donating money to the Children's Hospital blood bank, and buying a Tuberculosis Bond. One new activity was added to this Committee's program, namely, the manning of booths in the Tuberculosis Seal campaign.

The young girl who was financed by our Educational Committee in a nurse's training course graduated and is now practicing her profession. Since there is such a need for trained nurses at this time, the Committee will assist one or two more girls in taking this course, who will enter training in the fall.

To enable us to carry on our work this year, the Ways and Means Committee sponsored a most successful concert, given by the Men's Glee Club of Duke University.

We are happy to have been able to do our bit during the past year. No one knows what the future holds in store for us but whatever our duties may be, we will perform them willingly and to the best of our ability.

Mrs. Caryl Burbank,
President

NEWS AND PERSONALS

The American Medical Association has issued its Official Call to officers, fellows and members to convene in Atlantic City, New Jersey, June 8–12, 1942, for the 93rd Annual Session. The House of Delegates will assemble at 10 a.m., Monday, June 8. The Scientific Assembly will open on Tuesday with a general meeting at 8 p.m., followed by three days of Sectional meetings.

The Medical Society of the District of Columbia will be represented officially by its Delegate, Dr. Henry C. Macatee, and by the Society's Secretary, Mr. Theodore Wiprud. It is expected that a great many Society members will be in attendance.

The American Medical Golfing Association will hold its 28th Annual Tournament at Seaview Country Club, Atlantic City, on Monday, June 8. Forty trophies and prizes will be awarded. The Seaview Country Club at Absecon, New Jersey, has two 18-hole championship courses as well as an indoor salt-water pool. All male Fellows of the American Medical Association are eligible and cordially invited to become members of the American Medical Golfing Association. For further information write to the Executive Secretary, Bill Burns, 2020 Olds Tower, Lansing, Michigan.

The American Association for the Study of Goiter cancelled its annual meeting, scheduled for June 1–3 in Atlanta, Georgia, because of the present unsettled world conditions.

The Association of Military Surgeons selected **Dr. Charles Armstrong,** Chief of the Division of

Infectious Diseases, United States Public Health Service, as the **1942 Kober Foundation Lecturer.** His address on "Recent Developments in Neurotropic Virus Diseases" was delivered, May 5, before a large number of physicians and scientists at Gaston Hall, Georgetown University. Rev. David V. McCauley, S.J., Dean of Medicine of the University, presented him with the Kober certificate and with the $500 award.

Dr. Armstrong became associated with the Public Health Service in 1916 and with the National Institute of Health in 1921. Since his graduation from Johns Hopkins University, where he specialized in virus diseases, he has done considerable research work in choriomeningitis.

Dr. Donald Dexter Van Slyke was named to receive the **Kober Medal** for "distinguished research in preventive medicine" by the Association of American Physicians. The presentation was made May 5 at the annual meeting of the Association in Atlantic City, New Jersey.

Dr. Van Slyke has carried on his work at the Rockefeller Institute for Medical Research since 1907, and has been chemist of its hospital since 1914. Discovery of the new amino acid, hydroxylysine, is credited to him, as well as many methods in widespread use in clinical laboratories. Of these the most widely known are his gasometric methods. He has contributed more than 200 articles to scientific publications and has been Editor of the *Journal of Biological Chemistry* since 1914.

The Medical Society was well represented at the **26th Annual Session of the American College of Physicians,** held in St. Paul, April 20–24. In addition to Dr. Wallace M. Yater and Dr. Edward J. Stieglitz, who participated in the program, the following members registered: Drs. Lewis C. Ecker, Clayton B. Ethridge, Fred A. J. Geier, Oscar B. Hunter and Benjamin Manchester.

The George Washington University Medical Society held its seventh meeting of the year, April 18, at 1335 H Street, N.W. Dr. Louis H. Clerf, Professor of Laryngology and Broncho-Esophagoscopy, Jefferson Medical College, Philadelphia, addressed the Society on the subject, "The Etiology and Management of Coughs." Discussion was led by Drs. Daniel B. Moffett and Paul F. Dickens.

The Washington Ophthalmological Society met May 4 at the Episcopal Eye, Ear & Throat Hospital. Dr. Earl Burkey of the Wilmer Clinic, Baltimore, the guest speaker, chose for the subject of his address, "Allergy and Immunologic Reactions of the Eye." Dr. Ernest Sheppard gave a case report entitled "Aniseikonia—Report of Illustrative Cases with Exhibit and Slides." Case presentations were made by Drs. Frank D. Costenbader, Bernard J. Gurwin, John R. Lloyd, C. R. Naples, and Lt. Roy R. Powell, M.C., U.S.N.

Members of the **Clinico-Pathological Society** were guests of Dr. James N. Greear at his home, May 5. The following program was presented: "Diaphragmatic Hernia," Dr. William Earl Clark; "Encephalitis," Dr. James P. Leake; "Injury to Eye and Ear by Lightning," Dr. William Cabell Moore.

The Louis Mackall Medical Society held its banquet May 11 at the Columbia Country Club.

The Section on Gastroenterology elected the following slate of officers for the coming year, April 22:

Dr. J. Russell Verbrycke, *Chairman*; Dr. Fred A. J. Geier, *Vice Chairman*; Dr. Robert Sterling McGrath, *Secretary-Treasurer*.

The Georgetown Clinical Society held its annual business meeting and election of officers at the Hamilton Hotel, April 21. The following officers were elected:

Dr. A. J. Connolly, *President*; Dr. Edward O'Brien, *Vice President*; Dr. R. C. Kirchner, *Secretary-Treasurer.*

The Annual May Outing is scheduled for May 19 at the Washington Golf and Country Club. A golf tournament has been arranged, and the outing will close with a steak dinner at 7:30 p.m.

The Washington Academy of Surgery held its election of officers, April 10. Those who will serve during the coming year are:

Dr. Frederick C. Fishback, *President*; Dr. Fred R. Sanderson, *Vice President*; Dr. James W. Watts, *Secretary-Treasurer.*

The Jacobi Society, because of the war emergency, will hold no annual banquet this year. To take its place the Society held a Military Night Program at the Woodmont Country Club for its March meeting, which consisted of a Symposium on Medical Preparedness. Participants were as follows: Lt. M. E. Lapham, Procurement and Assignment Service; Comdr. Thomas B. Magath, Bureau of Medicine and Surgery, Navy Department; Lt. Col. William T. Fitts, Jr., and Col. Leonard G. Rowntree, Chief Medical Officer, Selective Service System.

Dr. Winfred Overholser discussed the proposed plan of supervised boarding homes for the mentally ill who might be eligible for this type of care, at a luncheon meeting of the Council of Social Agencies, April 23. He also addressed the annual meeting of the District Social Hygiene Society, May 8, on the subject, "Mental Strains in a War-torn World."

Dr. Arthur C. Christie was presented a testimonial by Leonard W. De Gast, General Secretary of the Central Y.M.C.A., at the annual reunion dinner of the "Old Timers" of the Y.M.C.A., held in the Association's building at 1736 G Street, N.W., April 10. Mr. De Gast expressed the appreciation of the Y.M.C.A. Board of Managers to Dr. Christie for his many years of service to the Y.M.C.A. Dr. Christie was President of the Association for three years, and served as a member of the Board for 21 years, having resigned last December.

Dr. T. J. Abernethy has returned from Station Hospital, Camp Claiborne, La., where he served from January 31 to May 1 as a member of the Pneumonia Commission of the Board for Investigation of Epidemic Diseases in the U.S. Army.

Dr. James W. Watts, Associate Clinical Professor of Neurosurgery at George Washington University School of Medicine, was awarded the John Horsley Memorial prize of $600 by the University of Virginia at Charlottesville, May 4, for his paper on "Psychosurgery," written in collaboration with Dr. Walter Freeman. The award is made every two years by the University.

Dr. John A. Reed, Chief of Emergency Medical Services for Civilian Defense in the District of Columbia, addressed air raid wardens, April 19, at local headquarters, 1341 Maryland Avenue, N.E. He also addressed members of the Progressive Citizens' Association of Georgetown at their meeting, April 6.

The District Chapter of the National Foundation for Infantile Paralysis has announced the reëlection of all officers for the coming year, including Drs. Edward Larkin and George C. Ruhland, members of the Executive Committee; Drs. H. Lynn Colvin, Custis Lee Hall, Guy W. Leadbetter and Julius S. Neviaser, members of the Board.

Dr. Russell J. Fields addressed a meeting of the District Social Hygiene Society, April 14.

Dr. John C. Whitehorn, Psychiatrist-in-Chief at Johns Hopkins Hospital, gave the **Smith-Reed-Russell lecture** at George Washington University School of Medicine, April 15. He spoke on "Psychiatry as a Basic Medical Science." Following the lecture Dr. Winfred Overholser was host at a luncheon at the Cosmos Club given in honor of Dr. Whitehorn.

Stanley D. Willis and Dr. A. B. Moore were reelected President and Secretary, respectively, of the Board of Directors of **Emergency Hospital,** April 24. **Drs. John H. Lyons** and **William B. Marbury** were elected new members of the Board.

It was reported that approximately $90,000 had been expended by the Hospital for the care of indigent patients during the fiscal year. Officials of the Hospital pledged the maintenance and service of 100 additional beds in the interest of civilian defense.

Dr. George C. Ruhland has been selected by the Community Chest Executive Council to serve as one of the general advisers during the ensuing year for the Washington Council of Social Agencies.

Malcolm Galbraith, Vice President and Director of Sales of the **Upjohn Company,** died April 10, in Kansas City. Mr. Galbraith was born in Bowmanville, Ontario, Canada, October 23, 1876. He received his Bachelor of Pharmacy degree from Ontario College of Pharmacy in 1898. In 1909 he joined the Upjohn Company and in 1929 was elected to the Board of Directors and named Director of Sales. He was made Vice President of the Company in May 1936.

BOOK REVIEWS

The Individual Criminal. Studies in the Psychogeneses of Crime. BEN KARPMAN, M.D. Price, $4.50. Washington: Nervous and Mental Disease Publishing Co., 1935; second printing, 1940.

The author, who is well known in psychiatric circles for his work and theoretical consideration of criminals, here presents five cases of criminals who have been quite intensely studied while in Howard Hall at St. Elizabeths Hospital. Each case is presented in two parts: the first, "Interpretational," under which is given the background including early life, adolescence, crimes committed, and personality make-up, with particular emphasis on the psychoanalytic interpretation of the individual; the second entitled "Diagnostic," giving the differential diagnosis in each case. Each case is then further reviewed under Summary and Conclusions, with a Psychobiopsy concluding it. Interspaced between the cases are what the author calls "Crime Mechanics," consisting for the most part of explanations and evaluations of these criminals by another inmate. These are very interesting. The book concludes with a brief chapter on the Psychotherapy of Criminals. It has a very good index, and also an index to criminal jargon which is quite helpful in defining the various terms used.

The author's approach is that each criminal deserves individual treatment and is a problem in himself. He makes the statement in his introduction ". . . one may look upon criminality as a special form of social parasitism in humans . . . human criminality . . . being found in all races, classes and other social groupings." He conjectures on the dormant criminality present in each of us, and states "The 'Coefficient of Criminality' varies with each one of us and no one knows when his dormant criminality is likely to come to the surface."

Nearly all of the cases presented indicated a bad family or childhood background, with ingrafted factors during adolescence, at first, merely an accidental introduction to criminality, and later, a drifting into it, either because they had nothing else to do or because it was the easiest way out. The diagnoses in the various cases range from hysterical neurosis to homosexuality without psychosis.

As an example, let us take the first case, which is that of a white male, aged 30, with a history of habitual criminality, his most recent sentence being for violation of the Interstate Commerce Act, robbing the American Express Company. He had a neurotic mother, who apparently had paranoid trends. One brother was psychopathic. As a boy he was somewhat spoiled, and there is some suggestion of introversion and ego-eccentricity. The father and mother were divorced and he was temporarily placed in foster homes that left a none too pleasant after-effect. His first brush with the law was for an innocent prank in appropriating a horse and buggy. He was so ashamed that he left home after escaping jail. He next worked aboard ship, coming into contacts that were none too wholesome, and later contracted syphilis at the age of 17. This was such a turning point in his life that he took the attitude of "why care?" He became promiscuous, drank, and gradually became more degraded. After a drunken orgy, his companions and himself broke into a church and drank the sacramental wine. For this he was convicted and denounced in court, being the only one caught because he was too drunk to get away. After serving his sentence he thirsted for revenge, his attitude being, "I have been branded a criminal, I might as well live up to it." His means of "getting even" was to commit more crimes, and he became a member of a gang for the first time. He began to work with bootleggers, and, later, the crime that landed him in Federal prison was the stealing of packages from freight cars. On his arrest he was mute and speechless, pleaded guilty to some charges of which he claimed he was innocent, and to cap the climax his sentence was three times that of his more daring companion. He got into St. Elizabeths by malingering and through his extreme nervousness. He rationalized on his dishonesty by asserting that "except for crimes" he was honest with everyone. The author concludes that this was a case of hysterical neurosis. In the discussion of the case the author gives a most interesting differentiation between neurosis and psychosis.

The other cases are equally well presented.

The book accomplishes some few things in transferring the enthusiasm of the author in his attitude to criminals and in making a valuable contribution to the study and enlightenment of what the author calls "our doubly unfortunate friends, The Criminal Insane."

PHILIP LITVIN, M.D.

Diseases of the Blood and Atlas of Hematology with Clinical and Hematologic Descriptions of the Blood Diseases, Including a Section on Technic and Terminology, 2nd ed. ROY R. KRACKE, M.D., Professor of Bacteriology, Pathology and Laboratory Diagnosis, Emory University School of Medicine, Atlanta. Pp. 692, with 100 illustrations. Price, cloth, $15.00. Philadelphia: Lippincott, 1941.

This book is highly recommended to everyone actively engaged in the practice of medicine. It is certain to fulfill its purpose "to find a useful place at the bedside, in the clinical laboratory, and in the research laboratory of hematology." Those interested in the general practice of medicine will like the hundred odd colored plates which make up a beautiful "Atlas of Hematology," and the clear and concise description of the formation and diseases of the blood. Treatment is properly evaluated. The internist will acknowledge the authoritative nature of the opinions expressed. The well considered bibliography will permit him to indulge his interest to the fullest extent. The laboratory worker will appreciate the comprehensive section on hematologic technic.

This second edition has given due recognizance to all important, recent developments in hematology. Noteworthy are the chapters on hemolytic anemias and hemoglobinuria, the new section on Vitamin K, the new material on bone marrow, the action of drugs on the blood, and the comprehensive section on blood transfusion and the operation of a blood bank.

M. J. McI.

Encephalitis, a Clinical Study. Josephine B. Neal, A.B., M.D., Sc.D., F.A.C.P., Associate Director, Bureau of Laboratories, Department of Health, New York; Clinical Professor of Neurology, College of Physicians and Surgeons, Columbia University. Pp. 563. New York: Grune & Stratton, 1942.

With the recent increase in interest in and knowledge of the virus diseases, the subject of encephalitis is receiving considerable attention. Because of this, Dr. Neal's attempt to bring together in one volume the essentials of our knowledge of encephalitis is particularly timely.

After a general discussion of the various encephalitides, there follows a chapter on epidemiology by Dr. Ralph S. Muckenfuss. Then the clinical course of epidemic encephalitis and its sequelae are described in detail, using a wealth of clinical cases which have been studied intensively over a great many years as a background. A chapter on the pathology of the encephalitides rounds out the book.

In spite of the fact that the book covers what is really a diverse group of clinical entities, and even though six collaborators aided in its writing, the result has been welded together into a fairly compact presentation. The type and format are excellent and the references are adequate. The book is highly recommended to physicians interested in neurology, and to pediatricians and internists interested in infectious diseases.

H. F. D.

A Primer on the Prevention of Deformity in Childhood. Richard Beverly Raney, M.D., Associate in Orthopaedic Surgery, Duke University School of Medicine; Attending Orthopaedic Surgeon, Watts Hospital, Durham, N.C., in collaboration with Alfred Rives Shands, Jr., M.D., Medical Director, Alfred I. duPont Institute of The Nemours Foundation, Wilmington, Del.; Visiting Professor of Orthopaedic Surgery, University of Pennsylvania School of Medicine. Pp. 188, with 88 illustrations. Price, cloth, $1.00. Elyria, Ohio: National Society for Crippled Children, Inc., 1941.

The title of this book is entirely descriptive of the material it includes. It is intended primarily as a means for dissemination of this material among those who make it possible for the orthopedic surgeon to carry on his work of preventing and correcting deformities. It accomplishes its purpose so admirably that it should be a part of the library of every physician, nurse or layman who is concerned in any way with the treatment of diseases of children.

The first chapter of the book describes the common affections of childhood which may cause deformity and considers their prevention in so far as this is possible. The subsequent chapters deal in regional order with the most important deformities and discuss the prevention of such deformities.

The book is beautifully and abundantly illustrated and clearly printed. The index is complete, and a glossary of orthopedic and other technical terms is included for the benefit of those readers who might lack the scientific training for a complete understanding of the text.

CHARLES MADDOX HAMMETT, M.D.
(1871–1942)

Dr. Charles Maddox Hammett, well known ophthalmologist, a Life Member of the Medical Society of the District of Columbia, died April 21 at his home, 1713 Rhode Island Avenue, N.W., where he also maintained his office.

Dr. Hammett was born in Washington, D. C., October 26, 1871, the son of Dr. Charles Massie Hammett, one of the first health officers of the District. He attended the District public schools and St. John's College at Annapolis, where he received the degree of Master of Arts in 1888. In 1892, before reaching the age of 21 years, he had received his degree in medicine from Georgetown University School of Medicine. He was appointed to the staff of Georgetown University as Professor of Ophthalmology in 1918, and in 1930 was made Chief of the Department of Ophthalmology. For one year, 1932, he served as Associate Professor and from then until his death as Professor Emeritus of Ophthalmology.

Dr. Hammett was elected an Active Member of the Medical Association of the District of Columbia in 1893, and of the Medical Society in 1895. Life Membership was conferred upon him January 1, 1934. He was a Fellow of the American Medical Association, and a member of the College of Physicians and Surgeons. He was also a member of the Lafayette Masonic Lodge.

Surviving are three sisters, Mrs. Adele H. Myers, Mrs. T. Nelson Conrad and Miss Lucy Hammett, all of Washington. He never married.

NATHAN NORMAN SMILER, M.D., F.A.C.S.

(1889–1942)

Dr. Nathan Norman Smiler, surgeon, an Active Member of the Medical Society of the District of Columbia, died at Dorchester House, 16th and Euclid Streets, N.W., where he resided, on May 5, 1942, following an illness of several years.

Born in Russia in 1889, Dr. Smiler came to this country in 1902. He graduated from the Philadelphia College of Pharmacy in 1912 and later attended George Washington University, receiving his degree in medicine in 1919. In the same year he was licensed to practice in the District. Dr. Smiler was a faculty member of George Washington University School of Medicine, serving as Clinical Instructor in Surgery. He was Assistant Surgeon at Emergency Hospital, having served on the staff for 20 years.

Dr. Smiler was elected an Active Member of the Medical Society in 1921. He held Fellowship in the American Medical Association and in the American College of Surgeons.

Surviving are his wife, Mrs. Margaret Smiler, a daughter, Mrs. Frances Gordon, and a son, Wesley B. Smiler, now serving in the Navy; two sisters, Mrs. Clara Smiler of Philadelphia and Mrs. Max Aronson of Washington, and a brother, Benjamin Smiler of Philadelphia.

JAMES BEATY GRIFFITH, M.D.

(1890–1942)

Dr. James Beaty Griffith, ophthalmologist, and staff surgeon at the Episcopal Eye, Ear and Throat Hospital, died at his home, 1746 K Street, N.W., May 6, 1942. He had been in ill health for some time.

Dr. Griffith was born July 17, 1890, at Severn, Maryland. He graduated from the University of Florida, and in 1918 was granted a degree as Doctor of Medicine from the University of Tennessee. He had practiced medicine in the District of Columbia since 1920. He held Fellowship in the American Academy of Ophthalmology and the American Medical Association, and membership in the Washington Ophthalmological Society and the National Rifle Association.

He is survived by his wife, Mrs. Florence Griffith, his mother, Mrs. Kate Griffith, and two sisters, Miss Mary Allen Griffith and Mrs. Albert R. Shedd.

WILLIAM BINFORD KING, M.D.

(1888–1942)

Dr. William Binford King, Past President of the Arlington County Medical Society, died suddenly, April 10, at his home, 734 South Twentieth Street, Arlington, Va.

Dr. King was Assistant Chief Medical and Liaison Officer of the Emergency Medical Service in the Metropolitan Area Defense organization. He was Counselor of the George Washington University Medical Society and served as its President in 1940.

A native of Richmond, Virginia, he received his early education in the public schools of that city. He graduated from George Washington University School of Medicine in 1925, and was a member of the medical faculty from 1917 to 1932. He also served on the faculty of Georgetown University School of Medicine for a number of years. He had resided in Arlington County for 25 years.

He is survived by his wife, Mrs. Mattie J. King, two daughters, Mrs. Iantha King Armstrong and Miss Martha King, and a son, William B. King, Jr. His mother, Mrs. Iantha Dooley King, of Richmond, also survives him, as well as two brothers and three sisters.

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mained in the hospital for 15 days without any recurrcene of his complaint and was discharged in good condition.

Comment

A newly recognized arthritic entity of unknown etiology but of excellent prognosis as to function has been set apart from the large group known as rheumatoid arthritis. The 2 cases reported illustrate well the features of this disease.

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WHY CLINICAL RESEARCH?*

HARRY F. DOWLING, M.D.
Clinical Professor of Medicine, George Washington University School of Medicine

TONIGHT marks the end of the first House Officers' Contest sponsored by the Medical Society of the District of Columbia. Original articles were submitted by house officers serving in the hospitals of the City and were judged by a committee from the Society on the basis of originality and importance of the project investigated and according to the excellence and thoroughness of the presentation. The committee was gratified by the high order of merit of all the papers submitted and wishes me to state that although the prizes had to be limited to three everyone who submitted a paper is to be congratulated.

Indeed, the general excellence of these papers was so inspiring as to tempt me to say a few words on the subject of clinical investigation, with the avowed purpose of inciting some or all of you to participate in its pleasures. How often has it happened to you that you have been filled to bursting with the embryo of an idea, and when, shining-eyed, you blurted out its great possibilities to a colleague or to a superior, you were silenced by scornful laughter followed by a dozen reasons why such an idea would not be worth investigating or could not be undertaken if it were. There are many who sit in the seat of the scornful. If clinical investigation produces results, we need not be concerned with the scoffers.

What are the values to be obtained from clinical research? In the first place, the clinical investigator is an inquirer, a seeker after truth. If he wants to know badly enough, he will find out. When he finds out, he can feel, and rightly so, that he has contributed to the sum of human knowledge. Such knowledge will be used to benefit humanity for centuries to come. In the words of the immortal Pasteur, "Take interest, I implore you, in those sacred dwellings—laboratories. Demand that they be multiplied, that they be adorned. These are the temples of the future—temples of well-being and of happiness. There it is that humanity grows greater, stronger, better." What he says of laboratories is equally true of investigation on a simpler scale. Minot says, "Clinical investigation does not necessarily require great laboratory setups. The sick individual is the center of the picture, so that wards with patients are the salient feature of the clinical investigative unit. . . . The technical apparatus required for intelligent observations and for the proper care of the patient is but a means to an end and is a relatively insignificant, though often to the casual observer the most impressive, feature of a clinical investigative unit."

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* Read before the Society on House Officers' Night, March 25, 1942.

The knowledge acquired by the investigator will also be used to benefit the individual patient himself. Although the patient may have been subjected to slight discomforts during the course of the experiment, the added knowledge obtained will be used to help him. This is only another way of saying that a patient receives the best treatment when he falls into the hands of a physician who is interested in his illness.

In addition to the acquisition of knowledge, clinical investigation performs another function: it trains the physician to do better work in any field he chooses to enter. There can be no better training in thoroughness than the heartbreaking repetition of an experiment which has been spoiled in the first attempt by a single slip in technic. There can be no better training in perseverance than the painstaking analysis of case after case until a sufficient number have been studied to give valid conclusions. There can be no better training in intellectual honesty than to formulate a theory, to find the evidence insufficient, and to admit its inadequacy, knowing full well that such an admission necessitates starting the same slow process all over again. Then there is the training to be obtained from setting down the results of the investigation after its completion. There is no better way to learn to write than to write. Bacon says, "Reading maketh a full man; conference a ready man; and writing an exact man." Accordingly, the cultivation of clinical research serves to train the individual to be a better worker, a better thinker, and thus, a better physician.

The third great value of clinical research may be characterized, for want of better words, as the acquisition of a group spirit. Our profession is individualistic in its attitudes and in its thinking. A great deal of latitude is given to the individual physician, while at the same time a great deal is expected of him. Most members of the profession believe that continued progress lies in the direction of continued individualism. However, if we are to meet the challenge of continued progress through independence of spirit, we must learn to work together at certain points. We must learn to coöperate when coöperation is the most effective way to get things done. Nowhere is teamwork more desirable and more necessary than in the pursuit of research. Teamwork must begin at the inception of the project, when there should be a fusion of ideas among all the participators. Then teamwork in the carrying out of the investigation is a necessity, that it may be shared equally, that all may learn jointly, and that all may participate in the joy of doing the work. Finally there must be coöperation when the results are published, that the glory may be shared among the contributors as they have contributed, in ideas, in time, and in effort, and particularly in order that no one person should stand in the spotlight with the result that others are hidden from view. If you believe, and I sometimes think it is true, that this last requires the greatest amount of coöperation, be consoled by the words of the great investigator Theobold Smith, who performed much of his work in this very city of Washington. He says, "The joy of research must be found in doing, since every other harvest is uncertain and even the prizes do not always go to the discoveries to which we would assign them."

The group spirit, then, as exemplified by the spirit of investigation, is a deity to whom I would commend the sacrifice of the best that is in you. If you heed the challenge, your minds will be free to seek the truth wherever and whatever it might be. To you, as to Topley, "authority—the intellectual authority of books or men—is incompatible with science. The scientist can never regard his books as more than temporary codifications of current working hypotheses and of the evidence on which they are

(*Continued on page 246*)

PROBLEMS IN THE LOCAL USE OF SULFONAMIDES*

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THE bacteriostatic action of the sulfonamide drugs against most organisms commonly encountered in infected wounds has been proved by many investigators. Its practical significance has been widely accepted, and good results are enthusiastically claimed from its use in all parts of the body and in all types of infected wounds. Clinical reports have fully justified this new treatment, and the local application of sulfonamide drugs is undoubtedly an important step toward solving one of the oldest surgical problems. Reports from England and from Hawaii have further substantiated the effectiveness of these drugs in contaminated war wounds. There have been, however, few critical evaluations of the local use of the various sulfonamides and of some of the problems encountered in this new treatment. At Gallinger Municipal Hospital more than 500 cases of contaminated and infected wounds have been treated locally with sulfonamides, and, as a whole, the end-results have been excellent.[1] There are, however, certain disadvantages and problems which have arisen. Some of these phases of sulfonamide therapy in surgical infection will be discussed.

Sulfonamides, unlike all other antiseptic agents, have a prolonged action on practically all common bacterial contaminants and are able to maintain this effect for many hours after application. The action, apparently specific toward the organisms and minimal upon body tissues, is chiefly dependent upon two factors: first, the concentration of the drug in contact with the organisms; second, the amount of free peptones and other sulfonamide-inhibiting substances present. Our experiences have shown that the maximal effect is obtained only by proper preparation of the wound. Inadequate drainage or failure to débride a wound of all necrotic tissue and pus not only prevents the drug from reaching the wound depth, but also inhibits the drug's action. Since the sulfonamides are thought to act by interfering with the nutritional requirements of certain bacteria,[2, 3] the presence of excessive organic debris makes the drug valueless. Adequate débridement usually means surgical excision of all non-viable tissue and thorough irrigation of the wound with large quantities of sterile saline solution. Some merit may be attached to irrigating the wound with hydrogen peroxide or azochloramide, since these substances help to provide an aerobic medium in which the sulfonamides are more effective. There is also some evidence of a specific action of these halogen derivatives against para-amino benzoic acid, which is the chief sulfone-inhibitor found in wounds.[4] Laxity in cleansing the wound and débridement is all too frequently noted with more dependence placed upon the ability of the sulfonamide drugs to combat infections.

The type of wound to some extent limits the effectiveness of local application. Deep, pocketed wounds and inaccessible walled-off abscesses or draining fistulae cannot be benefited unless the wound is first converted into an open accessible area by proper surgical drainage. To some extent there may be limited diffusion into surrounding tissues following local application of the powdered drug. For this reason sulfanilamide, which is the most diffusible and readily absorbed of the current sulfonamides, is frequently preferred to the other drugs. Any such diffusion, however, is probably not extensive, for even with local tissue concentration of 800 mg. per cent, systemic concentrations usually do not exceed 2 or 3 mg. per 100 c.c. of blood. Such a high local concentration of any of the known sulfonamides is bacteriostatic for all organisms commonly encountered in wounds. Experiments in vitro devised to prove the superiority of one drug over the other are not well adapted to surgical infections, for if an adequate amount is used in a well prepared wound, there is little specificity apparent, and one sulfonamide seems to be as effective as another, regardless of the bacterial flora. Sulfanilamide, being the cheapest, is frequently the drug of choice. If specificity is desirable, sulfathiazole may be more efficient against staphylococci, the most frequent contaminant, but sulfanilamide is more effective against streptococci, which is the most dangerous and most feared invader.

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* This paper, presented before the Society on House Officers' Night, March 25, 1942, was awarded first prize.

Most pyogenic wounds, if free of debris and adequately drained, become practically sterile after 3 or 4 days of powdered sulfanilamide applications.[1, 5] In a series of 80 grossly infected surgical wounds, smears and plated cultures were taken before débridement and at frequent intervals during treatment. In practically all cases a mixed flora was found. Some of the wounds, particularly chronically infected ulcerations, contained 4 or 5 different types of organisms. To estimate the bacterial growth of these lesions quantitatively, an arbitrary standard was devised. The wounds were each irrigated daily with 100 c.c. of sterile saline solution, and 1 c.c. of these washings was plated on blood agar medium. Following each irrigation sufficient sulfanilamide powder was placed in the wound to cover the entire area. Most of the wounds, if kept free of debris and adequately drained, became practically sterile, as estimated by this plating method, after 3 to 6 days. Chart 1 shows the types of organisms encountered in this series and the selectivity of the action of sulfanilamide. As might be expected, streptococci and staphylococci predominate, with Pseudomonas pyocyaneus and E. coli and diphtheroids present in many wounds. After 6 days 56 of the 80 cases showed very little or no growth, and all of the rest showed a marked diminution in colony counts. In several cases of draining and secondarily infected tuberculous sinuses none of the sulfonamide drugs had any effect in changing or diminishing the secondary infection. The actual choice of sulfonamide drug seems unimportant compared with the necessity for preparing the wound to receive the drug. None of these drugs is an effective antiseptic in the presence of true sepsis.

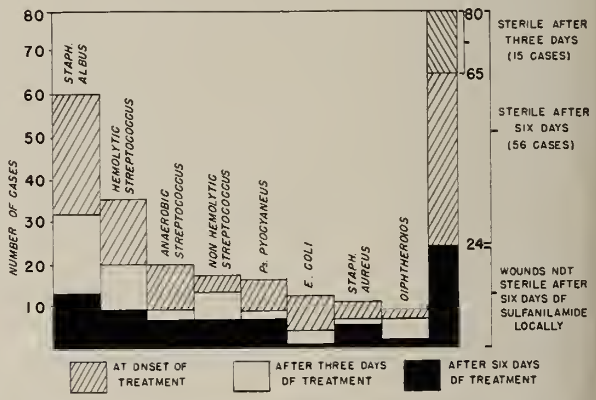

CHART 1. Series of 80 cases of infected ulcerations in which serial quantitative bacteriologic studies were made. Wounds were irrigated daily with 100 c.c. of normal saline solution, then 1 c.c. of the washings was plated and cultured. Sulfanilamide powder was applied daily after the irrigation. Seventy per cent of these wounds were practically sterile after 6 days of such treatment.

Wound healing in the presence of sulfonamides is still an unsettled subject. Retarded healing has been reported by several workers.[6, 7, 8, 9] Other surgeons have disclaimed this, observing no delay or weakness in primary union of experimental and clinical wounds and fractures.[10, 11, 12] In order to understand this apparent discrepancy biopsies were taken from the wound edges of 70 infected wounds, most of which were undermined infected decubitus ulcers. Biopsies were repeated at frequent intervals during treatment, and several general observations were made. In no instance was there gross or microscopic evidence of sulfanilamide interfering with the normal physiology of healing. There was no evidence that the drug kills off fibroblasts or epithelium. The powder, however, is slowly absorbed, and in fairly clean incised wounds it undoubtedly does prevent early contact of the contiguous wound edges, thus slowing healing. Such wounds, when healed, appear fully as strong as when the drug is not used, and leave just as little scar. Sulfanilamide powder, when freshly applied, is frequently accompanied by increased oozing of small blood vessels; in several herniorrhaphies in which 10 Gm. of the powder was implanted subcutaneously, this oozing was sufficient to form a hematoma and necessitate drainage of the serosanguineous fluid. Because of these various local reactions, more judicious use of the sulfonamides and smaller doses is indicated. Topical application of the drug in any contaminated or infected wound is certainly advantageous and should be followed; its routine use in clean operative wounds in which normal healing is expected is unnecessary and should be discouraged.

The prolonged use of sulfonamide drugs by repeated daily applications of the powder to infected ulcerations and infected burns produced yet another problem. Whether due to the drying-out action of any such powder or a property of the drug, healing gradually became slowed, granulation tissues appeared pale, dried out, inert and dull. Microscopic sections of the granulation bed showed pale staining nuclei in most of the cells, with a marked lack of new blood-vessel formation. Even though infection was controlled, the wounds remained inert and the healing time in such cases was definitely prolonged. If sulfonamide therapy was stopped, healing usually was resumed, but occasionally reinfection occurred. This problem was effectually solved by substituting a greaseless ointment base for the dry powder and by using only 10 per cent of the sulfonamide drug, which proved adequate to prevent infection.[5] In order to encourage more lively granulation 2 per cent of allantoin was added to the base. Allantoin, isolated by Robinson[13] as the active principle of maggot secretions, increases the proliferative rate of fibroblasts and angioblasts.[14] Microscopic evidence of greatly increased vascularity and healing seems to justify the addition of this drug to sulfonamide therapy in certain instances.

General toxic manifestations from the local use of sulfonamides do not occur frequently. Occasionally from fresh burns or from repeated applications absorption is great enough to give a blood concentration of the drug which may produce toxic systemic symptoms. With the application of powdered sulfonamides into the peritoneal cavity there have been several instances in which transient jaundice appeared, and a moderate rise of the icteric index has been found in some patients without clinical jaundice. In such cases the supplementary administration of sulfonamides by mouth would be contraindicated.

SUMMARY

Local sulfonamide therapy is effective in preventing infection in contaminated wounds and is of value in the treatment of infected wounds. Powdered sulfanilamide can be safely implanted in contaminated wounds and does not appreciably interfere with healing unless large amounts are used. Several problems encountered in the treatment of a large number of such wounds are discussed, with bacteriologic and histologic studies of the effect of the sulfonamide drugs on the physiology of wound healing. More important than the choice of the sulfonamide drug to be used is the proper preparation of the wound for the reception of the drug. Sulfonamide therapy is not a substitute for surgical judgment and meticulous care.

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INFLUENZAL MENINGITIS: EVALUATION OF THERAPY AND USE OF SULFADIAZINE*

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FROM July 1, 1938 to December 31, 1941 there have been fifteen cases of influenzal meningitis observed in this hospital. Five of these cases occurred in a recent period of 2 months, stimulating study and evaluation of therapy in this disease.

Although as recently as 1934[1] influenzal meningitis was considered by some to be a comparatively rare disease, many writers have pointed out the importance and frequency of its occurrence, especially in early life. Finland and Dingle,[2] among others, in a recent review of the meningitides, reëmphasize that the influenza bacillus is being recognized as one of the most frequent causes of meningitis in infants and young children.

The increased recognition is probably due to facilitation of diagnosis by improved bacteriologic technics, especially that of routine culture of spinal fluids on improved media in cases of suspected meningitis. The rapidity of diagnosis has been enhanced by the recent use of the capsular swelling test, a reaction analogous to typing pneumococci, which may be carried out directly on spinal fluid or its sediment with commercially available antiserum. Since 95 per cent of the influenzal meningitis cases are caused by Type B Hemophilus influenzae,[3] this simplifies the immediate immunologic diagnosis.

Influenzal meningitis is primarily a disease of early life, approximately 70 per cent of the cases occurring in children under 2 years of age.[4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14] However, some recent reports tend to indicate that this may not be accurate. The consecutive reports of Neal[6, 11, 12] show an increase in patients more than 2 years of age from 26 per cent in her first report to 46 per cent in 1935.

NATURAL COURSE OF INFLUENZAL MENINGITIS

As recently as 1926, pediatricians of broad experience stated in widely used texts[15, 16] that they had never seen patients with this disease recover. However, a review of the literature enables one to get a different perspective of the disease. The gross mortality ranges from 90 to 100 per cent.[4, 5, 7, 8, 9, 11, 12, 13, 14, 17, 18] In patients under 2 years of age, the mortality rate varies from 94 to 100 per cent, while in those over 2 years it varies from 79 to 100 per cent. The consensus approximates that of Bloom,[7] who reports a mortality rate of 96.7 per cent below 2 years of age and of 85 per cent above 2 years. Since Bloom's cases are collected from the literature, it is well to note that, whereas single case recoveries are reported with great frequency, fatalities often go unreported. Thus his mortality rates may have an unwarrantedly optimistic tinge. The largest single series recorded comprises 111 cases;[11] in them the mortality rate of the group below 2 years of age was 98 per cent, while above 2 years of age it was 93 per cent. That there may be an immunologic basis for the slightly but significantly improved prognosis in the patients over 2 years of age was pointed out by Fothergill and Wright.[10] They showed that between the ages of 2 months and 3 years the blood has practically no bactericidal action against the causal organism, whereas there is an increase in the bactericidal power of the blood in those over 3 years of age.

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* This paper, presented before the Society on House Officers' Night, March 25, 1942, was awarded third prize.

EVALUATION OF THERAPY

Since 70 per cent of the patients are less than 2 years of age and only 2 to 3 per cent of these patients recover spontaneously, any acceptable therapeutic agent must be of proven value in these young patients. Failures as well as successes must be reported if we are to evaluate correctly the efficacy of a proposed treatment.

TABLE 1

Data of patients who died

	PATIENT	SEX	COLOR	AGE	DAYS ILL PRIOR TO ADMISSION	HOSPITAL ADMISSION DATE	DAYS IN HOSPITAL BEFORE DEATH	NUMBER OF SPINAL PUNCTURES	TREATMENT	
									Serum	Chemotherapy
1	F. F.	M	C	8 yrs.	2	11/28/38	4	4	Horse serum and complement i. t.	Sulfanilamide orally
2	C. E.	M	C	18 mos.	1	12/ 8/38	28	24	Horse serum and complement i. t.	Sulfanilamide orally
3	L. P.	M	W	5 mos.	4	3/20/39	19	20	Horse serum i. v. and i. t. and complement i. t.	Sulfanilamide
4	D. T.	M	W	7 wks.	2	6/28/39	12	20	Horse serum i. v. and i. t. with complement i. t.	None
5	S. J.	F	C	7 mos.	4	7/27/39	29	48	Horse serum with complement i. t.	Sulfapyridine i. v. and orally
6	S. P.	F	C	19 mos.	1	10/29/39	41	47	Horse serum i. v. and i. t. with complement i. t.	Sulfanilamide orally
7	R. L.	M	C	2½ mos.	1	1/13/40	7	6	Horse serum i. v. and i. t. with complement i. t.	Sulfapyridine, Sulfanilamide orally
8	M. B.	M	C	7 mos.	*	10/13/41	20	9	Rabbit serum i. v.	Sulfapyridine, Sulfadiazine
9	J. W.	F	W	19 mos.	1	12/14/41	30 min.†	1	None	None

* Patient had bilateral otitis media on admission. Seemed to be improving when on 10/19/41 convulsion occurred. Spinal tap on 10/19/41 was normal. Further meningeal signs appeared on 10/22/41. Repeated spinal taps revealed organisms on 10/23/41. The meningitis secondary to petrositis was not amenable to surgery.

† Spinal puncture done 5 minutes post mortem.

Specific therapy in the modern era has revolved about the use of immune sera, administered intravenously and intrathecally, and chemotherapy. Prior to the use of the sulfonamides, immune horse serum was extensively used in influenzal meningitis. However, the results in all age groups were discouraging, and there was no obvious justification for optimism as to the possibilities of future work with this serum.[19,20]

With the advent of chemotherapy some patients were treated with one of the sulfonamides alone and others were treated by the combined use of drug and immune sera. The introduction of two therapeutic agents made the evaluation of the exact role of either extremely difficult, if not impossible.[21]

Aleman[18] reported 82 patients in whom sulfanilamide was used, including 30 who also received serum. She noted a gross mortality rate of 87.8 per cent and had no recoveries in the patients under 2 years of age. These results are not very striking, to say the least. Although reported cases were too few to evaluate, Aleman felt that sulfapyridine probably would be helpful as an adjunct to serum therapy.

In 1939 Alexander[20] introduced immune rabbit serum and reported that this serum penetrated the cerebrospinal blood-brain barrier with more facility than immune horse serum. Opportunity for evaluation of this serum used alone, unfortunately, is not available, since influenzal meningitis is such a devastating disease that the consensus[2,3,22] of experts in the field is that combined immune rabbit serum and sulfonamide therapy is the treatment of choice.

In her most recent paper, Alexander,[22] using the combined therapy in 28 patients, reports 17 recoveries, a gross mortality rate of 39 per cent. Of 12 patients under 2 years of age, 7 recovered, a mortality rate of 41 per cent for this group. These figures are indeed encouraging, but many more patients will have to be treated, especially in the lower age bracket, before their final acceptance. Recently, Hoyne[23] reported 13 patients recovering, in 9 of whom no serum was used. He[24] doubts that better results are obtainable with combined therapy than with sulfonamide therapy alone. Since he does not list the fatalities encountered in the same period of time or with similar treatment as in the reported recoveries, evaluation of this work is impossible.

TABLE 2

Data of patients who recovered

	PATIENT	SEX	COLOR	AGE	DAYS ILL PRIOR TO ADMISSION	HOSPITAL ADMISSION DATE	DAYS IN HOSPITAL	NUMBER OF SPINAL PUNCTURES	TREATMENT	
									Serum	Chemotherapy
1	C. W.	M	W	10 mos.	1	10/ 5/39	70	44	Fothergill's anti-influenzal horse serum i. v. initially, then i. t. plus complement	Sulfanilamide orally and subcut.
2	C. C.	M	C	4 yrs.	1	1/10/41	41	26	Horse serum i. v. initially, then i. t. plus complement	Sulfanilamide orally and subcut.
3	P. E.	M	C	21 mos.	2	6/11/41	20	4	None	Sulfapyridine orally
4	C. T.	F	C	3 yrs.	3	11/ 3/41	35	10	Alexander's rabbit serum i. v. (75 mg. nitrogen antibody)	Sulfathiazole,* Sulfadiazine orally and i. v.
5	H. Y.	F	C	3 yrs.	1	11/ 7/41	25	5	Alexander's rabbit serum i. v. (75 mg. nitrogen antibody)	Sulfadiazine orally and i.v.
6	N. N.	F	W	28 yrs.	2	11/23/41	20	3	Alexander's rabbit serum i. v. (75 mg. nitrogen antibody)	Sulfadiazine orally and i. v

* Patient started on sulfathiazole for pneumonia. Influenzal meningitis diagnosed two days after admission. Patient did well on sulfathiazole but exacerbation of meningitis, as revealed by spinal fluid examination and physical signs, occurred on 8th day of disease. Sulfadiazine used from that time.

DISCUSSION OF CASES

Among the 15 patients here reported there were 9 deaths (table 1) and 6 recoveries (table 2). Table 3 analyzes the age incidence and results. The salient features to be noted are that (1) of the 6 recoveries, only 2 were under 2 years of age; (2) of the 9 deaths, 6 were under 1 year of age and 8 were under 2 years of age; and (3) only 1 death occurred in a patient over 2 years of age.

TABLE 3

Analysis of Cases

AGE IN YEARS	TOTAL	DIED	RECOVERED	MORTALITY RATE %
0–1	7	6*	1	85
1–2	3	2	1	66.6
2 plus	5	1	4	20
TOTAL	15	9*	6	60

* One case not treated.

Of the 9 patients treated with immune horse serum, administered for the most part intrathecally, and with either sulfanilamide or sulfapyridine, there were 7 fatalities and 2 recoveries, a mortality rate of 77 per cent. Of these 9 patients, only 2 were over 2 years of age, 1 of whom recovered. One of 7 patients under 2 years of age recovered. Thus, in spite of combined therapy with immune horse serum and the earlier sulfones, influenzal meningitis remains a devastating disease in the age group below 2 years, which is the critical age in evaluation of results.

It is interesting to note that in the case of P. E. (table 2) the spinal fluid, although definitely pathologic, did not have sufficient organisms to allow rapid immunologic diagnosis. The patient was started on sulfapyridine orally, and by the time the positive culture was reported, was doing so well that no serum was given. This is a case of recovery in which only the ordinary dosage of sulfapyridine was sufficient.

In the last 4 treated patients, immune rabbit serum given intravenously diluted with saline, and sulfadiazine in adequate dosage were used. A review of the accessible recent literature does not reveal the use of sulfadiazine as having been reported in treating influenzal meningitis. Its use is based on the fact that it is less toxic than the other sulfonamides and that adequate levels in the blood can be attained quickly.[25, 26, 27] Blood levels of 9 to 15 mg. per cent were maintained in our patients. An oral dosage of $\frac{1}{2}$ to 1 grain per pound of body weight was given in divided doses every 24 hours and was supplemented, when needed, by the intravenous administration of 5 per cent sodium sulfadiazine.

In each of these patients, 3 ampoules (75 mg. of nitrogen antibody) of the immune rabbit serum was sufficient to provide an excess of antibodies in the blood stream as evidenced by positive capsular swelling of test organisms with the patient's blood.

In 3 of the 4 patients in which such combined therapy was used, there was recovery, but none of the patients who recovered was in the critical age range. The failure was in a patient (M. B.) within the critical age range but in whom the meningitis was a complication of a primary otitis media and a necrotizing petrositis, as shown at autopsy. This method of treatment deserves further trial, and opinion of its efficacy should be reserved until many more cases are reported, especially in patients below the age of 2 years.

In the past year the administration of immune sera by the intrathecal route has been abandoned. The sterile meningitis which almost invariably occurs with this technic may be a deterrent in the recovery of patients so treated. Many authorities[2, 3, 22, 24] now feel that the intravenous administration of sera may indeed be the method of choice.

It is interesting to note the reduction in the total number of spinal punctures (see table 2) in our cases treated since the cessation of use of the intrathecal therapy. In the 2 recoveries in which intrathecal therapy was used, there were 44 and 26 punctures, respectively, while in the 4 recovered cases in which intravenous therapy was used, an average of 5 punctures were performed. Also of interest is the fact that the 2 intrathecally treated cases remained in the hospital 70 and 41 days, respectively, before discharge, while the 4 cases not so treated had an average hospital stay of 25 days. While this reduction in hospital residency is partially explained by use of more potent sera and chemotherapy, the factor of reduced spinal punctures may well be contributory to the shorter stay.

SUMMARY AND CONCLUSIONS

1. A review of the cases of influenzal meningitis in a general hospital reveals that 15 cases have been seen in $3\frac{1}{2}$ years, 5 of which occurred recently within a period of 2 months.

2. With the various methods of treatment there have been 9 deaths and 6 recoveries. Of the 9 deaths, 8 occurred in patients less than 2 years of age, and of the 6 recoveries only 2 patients were under 2 years of age.

3. There is a critical age at 2 years below which recoveries with or without treatment are less frequent than in other age groups.

4. The advisability of the use of intrathecal administration of sera has been questioned, and some comparisons of intravenous with intrathecal therapy have been made.

5. Among the last 4 treated patients, the use of intravenous immune rabbit serum and sulfadiazine in adequate dosage has resulted in recovery in 3 cases.

6. Sulfadiazine may prove to be the chemotherapeutic agent of choice in influenzal meningitis therapy.

7. Prognosis in cases of influenzal meningitis occurring in patients more than 2 years of age and treated with this combined therapy is markedly enhanced.

8. Final evaluation of any therapy in this disease awaits usage in a larger number of cases than has yet been collected. The evaluation should particularly include efficacy of the therapy below the critical age level.

N.B. Dr. Lewis K. Sweet, Chief Resident Pediatrician, Gallinger Municipal Hospital, gave invaluable advice in the preparation of the data in this paper.

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Doctor debunks common belief about the source of impetigo. The presence of impetigo, an inflammatory skin disease, does not indicate carelessness on the part of physicians or nurses on the hospital staff as is commonly believed, William C. Danforth, M.D., Evanston, Ill., declares in an article, appearing in the May, 1942 issue of *Hygeia, The Health Magazine,* explaining why the newborn infant sometimes has lesions of impetigo.

Impetigo, which is characterized by isolated pustules is caused by bacteria—the staphylococci—which are found in the skin and body orifices at all times, he says.

"When an eruption of impetigo appears on a newborn baby," the physician points out, "it usually comes soon after birth—in fact many babies are born with the spots already on their bodies! In such instances staphylococci circulating in the mother's blood have passed through the placenta into the circulation of the baby, attacking the baby's skin before birth. It is known that bacteria can pass through the placenta from the mother's into the baby's circulation, because babies have been born with the rash of measles or smallpox—when the mothers were suffering from those diseases. It has also been known for years that the organism which causes syphilis may pass from the mother to the infant. Thus when staphylococci enter the bloodstream of the baby from that of the mother they are doing what a number of other germs are demonstrably able to do.

"Actually, it is impossible for a baby to pass from the interior of the uterus to the outer world without being in contact with bacteria. The birth canal itself always contains a number of different bacteria. Attempts to render the birth canal entirely bacteria-free through use of chemical antiseptics are often dangerous; experience has shown that for the safety of the mother it is wiser to rely on the natural resistance of the mother's organism. Hence the infant is exposed for a time to contact with bacteria—the staphylococcus among others, even during the most normal and smoothly progressing labors. The possibility of infection is always present, and the possibility of impetigo in the baby is as great when birth occurs at home as it is in hospital deliveries. . . . An occasional case of impetigo is bound to occur, no matter what precautions are taken, and this is in no way the fault of the attending physicians, or the fault of the nurses, or the fault of the hospital. . . ."

Dr. Danforth points out that as soon as impetigo is detected on the body of a baby in a nursery hospital, he is taken away from the other infants and placed in isolation. Since the disease is highly contagious, every precaution is taken to prevent its spread to other infants.

CHILDHOOD PNEUMONIA*
A Correlation of Clinical and Autopsy Findings

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THE clinical diagnosis of pneumonia in an infant or child is frequently difficult and often questionable. An unusually interesting and profitable opportunity to study this problem was presented in reviewing the records of patients at Children's Hospital who came to necropsy.

TABLE 1

Summary of pneumonia cases with necropsies, November 1, 1940 to November 1, 1941

CLINICAL DIAGNOSIS	CONFIRMED BY GROSS AND HISTOLOGIC FINDINGS	CONFIRMED BY GROSS OR HISTOLOGIC FINDINGS	UNCONFIRMED AT AUTOPSY
Pneumonia 33	13	11	9
Lobar 21	7 lobar 2 bronchopneumonias	7	5
Bronchopneumonic 12	3 bronchopneumonias 1 lobar	4	4

During the period from November 1, 1940 to November 1, 1941 there were 33 patients with the clinical diagnosis of pneumonia on whom autopsies were made. An additional 9 cases of pneumonia not diagnosed clinically were discovered only at necropsy. Table 1 reveals the number of cases in which the clinical diagnosis proved correct, and the distribution as to lobar and bronchopneumonic types of consolidation. The common necropsy findings among the last or unconfirmed group were (1) pulmonary congestion, (2) pulmonary edema, and (3) multiple small scattered atelectatic areas. One patient was found to have entirely normal lungs while another showed multiple small abscesses.

TABLE 2

*Pneumonias found at necropsy, undiagnosed clinically**

CLINICAL DIAGNOSIS	NO. OF CASES
Acute bronchitis or tracheobronchitis	3
Pneumococcal meningitis	3
Decompensated congenital heart disease	1
Possible septicemia	1
Dead on arrival	1

* All patients in the hospital less than 24 hours.

In the group of pneumonias found only at necropsy, 3 proved to be lobar and 6 bronchopneumonic in type. The clinical diagnoses in these cases are shown in table 2. Scrutiny of the histories disclosed that none of these patients were in the hospital more than 24 hours, 1 expiring after only 1 hour, another being dead on entry. Thus, one may justifiably assume that several of these cases of pneumonia might well have been detected clinically had the child survived a few hours longer.

Infants and antiquarians are commonly thought to suffer with a bronchopneumonic rather than a lobar type of consolidation, but in this series of pneumonias confirmed by autopsy, small though it is, 18 cases of lobar pneumonia and only 15 cases of bronchopneumonia were found. Among the patients having lobar pneumonia, the age incidence varied from 2 weeks to 10 years, with a mean of 4 months. In the bronchopneumonic group the ages ranged from 3 weeks to 2½ years with a mean of 9 months.

Complications of pneumonia present at

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* This paper, presented before the Society on House Officers' Night, March 25, 1942, received honorable mention.

necropsy were viewed with considerable interest as regards both their frequency of occurrence and the bacteriologic findings. Both are tabulated in table 3. These figures suggest that pneumonic complications are frequently the result of staphylococcic infection and that there is a much higher incidence of complications in the lobar than in the bronchopneumonic type of consolidation.

TABLE 3

Complications of pneumonia determined at necropsy

TYPE OF CONSOLIDATION	COMPLICATION	NO. OF CASES	ETIOLOGIC ORGANISM
Lobar	Empyema	3	Staph. aureus, Pneumococcus, Type 4, Pneumococcus, Type 23
	Lung abscesses	3	Staph. aureus, Staph. albus, Pneumococcus, Type 25
	Meningitis	3	Pneumococcus, Types 4, 7, 9
	Acute pericarditis	1	Pneumococcus, Type 4
	Pleural adhesions	2	Pneumococcus, Types 23, 31
	Atelectasis, multiple small areas	2	Pneumococcus, Types 4, 31
	Hemothorax	1	Pneumococcus, Type 31
Bronchopneumonic	Meningitis	2	Pneumococcus, Types 5, 19
	Atelectasis, multiple small areas	2	Staph. aureus (1), Undetermined (1)
	Lung abscesses, multiple	1	Staph. aureus

The clinician is sometimes at a loss to interpret the results of a throat or sputum culture and may justifiably conclude that the organisms isolated actually have little or no etiologic significance. This is particularly true when he is dealing with children, from whom it is often difficult to obtain a satisfactory sputum specimen. Also one occasionally suspects that the organism found may be a normal inhabitant of the nose and throat. Therefore, an attempt has been made to correlate the bacteriologic findings reported before death with those obtained at the autopsy-table. Unfortunately cultures were not made, either antemortem or postmortem, in 17 cases. Where both were reported the antemortem bacteriologic findings were confirmed at necropsy in 13 cases; 9 of these fell into the lobar classification and 4 into the bronchopneumonic. Bacteriologic studies were not confirmed in 3 patients. While this series is very small, one is encouraged to note that in 13 of the 16 cases studied bacteriologically the antemortem findings were confirmed by cultures taken at necropsy.

The incidence of the various types of pneumococci commonly obtained from all the body sources during this one-year period at the Children's Hospital have been tabulated in table 4.

TABLE 4

Types of pneumococci derived from all sources

TYPE OF PNEUMOCOCCUS	CASE INCIDENCE
19	24
6	22
14	21
4	11
28	11
3	10
7	9
23	9
1	8

In table 5 is shown the incidence of pneumococcal types with relation to the common sources of material from which these organisms are derived. The findings in ear cultures and in sputa are such as would be indicated from a study of table 4, compiled from all possible sources of pneumococci; i.e., both show approximately the same distribution of types. In contrast, a critical examination of the spinal and pleural fluid groups shows a considerable discrepancy. Thus the relative incidence of Type 28 pneumococci appears to be much higher in the spinal fluid than in the sputum; that of Type 1 pneumococcus is relatively higher in pleural fluid, having been isolated from 44 per cent of the empyema cases but from the sputum of only 3 patients, even though sputum was the most common source of typing material. Caution must be observed, however, in placing too much weight upon these latter observations, since the series reviewed covered a period of only 1 year and might well vary from results obtained during another period of 1 or more years.

TABLE 5

Types of pneumococci derived from various sources

SOURCE	TYPE OF PNEUMOCOCCI	CASE INCIDENCE
Sputum	6	18
	19	16
	14	15
	3	9
Ear	19	7
	4	4
	14	2
Spinal fluid	28	4
	6	2
	14	2
Pleural fluid	1	4
	9	2
	14	2
	4	1

In conclusion, it may be reiterated that pneumonia is often a difficult disease to diagnose clinically in a child. In this series of pneumonias seen at Children's Hospital over a period of 1 year the clinical diagnosis of pneumonia was confirmed at necropsy in 73 per cent of the cases. Of the 42 patients with necropsies, 21 per cent showed a pneumonia which had not been recognized clinically; however, none of these patients were in the hospital more than 24 hours; a third had an associated pneumococcal meningitis which had been recognized. Of the 33 pneumonia cases proved at necropsy, 54.5 per cent possessed a lobar type of consolidation. Of the bacteriologic studies made before the patient expired, 81 per cent were confirmed by cultures taken at the necropsy table. This fact suggests that more extensive bacteriologic examinations be made whenever a diagnostic problem arises.

Tells of simple way to treat nail puncture wounds of foot. A simple plan of treatment for nail puncture wounds of the foot is described in *The Journal of the American Medical Association* for May 30, 1942 by Fred H. Bowen, M.D., Lieutenant (j. g.), U. S. Naval Reserve, New River, N. C., who says that a total of 661 such wounds were treated by the method with no deaths or tetanus.

Pointing out that there is a wide diversity of opinion in medical literature concerning the proper treatment of such wounds of the foot, Dr. Bowen says that "most authors advocate probing the wound, laying it open, injecting an antiseptic solution . . . and instituting some form of drainage. It is my opinion that such treatment is unnecessary, painful and harmful and that it is followed by prolonged disability and at times by a painful . . . scar. Foreign bodies are not often carried deeply into the foot by a nail but they lie in the dermis or just beneath it. . . ."

He says that he has demonstrated that nails (6 to 20 penny) are wiped clean in the first ¼ inch of the wound.

In dealing with cases of nail puncture wounds incurred by laborers in the construction of the United States Naval Air Station at Jacksonville, Fla., he says the following simple plan of treatment was used: The foot was soaked for fifteen to thirty minutes in hot water to which liniment of soft soap or a small quantity of a solution of cresol was added. The foot was dried carefully, and an area about 2 to 3 inches in diameter around the wound was painted with tincture of mercresin. The top layer of the skin was cut away around the wound. This exposed the foreign matter (usually sand, rarely particles of sock, leather, rust, rubber or concrete), which could then be easily removed. A dry dressing was applied, and 1,500 units of tetanus antitoxin was given. If the wound was caused by a nail larger than a 10 penny, the patient was told not to work for at least one or two days, but if a nail of lesser diameter was involved he returned at once to work.

A STUDY OF THE POLIOMYELITIS CASES ADMITTED TO CHILDREN'S HOSPITAL IN 1941*

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DURING 1941, 74 patients with acute poliomyelitis were treated at Children's Hospital. There were 28 patients from the District of Columbia, 15 from Virginia, and 30 from Maryland. One patient was transferred from Tennessee.

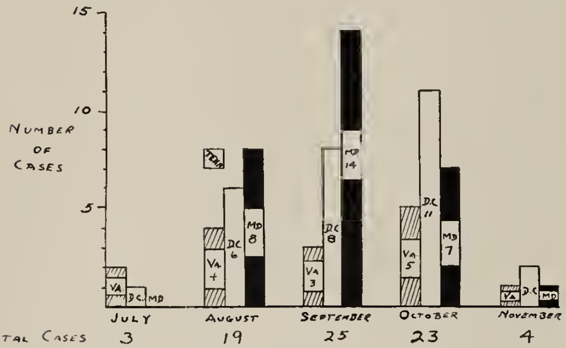

CHART 1. Number and distribution of poliomyelitis cases, Children's Hospital, 1941

In most of the cases the onset was in August (26 per cent), September (34 per cent), and October (31 per cent); in 3 cases (4 per cent) it occurred in July. The epidemic reached its peak in Maryland in September but did not do so in the District of Columbia until October (chart 1).

The ages of the patients ranged from 18 months to 16 years, the average being 7 years. Although the greatest incidence of poliomyelitis is said to be in the second year of life and relatively infrequent after the fourth year, this was not the case in this series. Only 4 per cent occurred in the second year and 18 per cent during the first 4 years, whereas 24 per cent occurred in the fifth and sixth years and about half of the cases from the fifth through the ninth year.

White patients outnumbered colored, 68 to 6. Several suspected colored patients were transferred to Gallinger Municipal Hospital because of lack of accommodation, but even these few do not explain the high percentage of white patients. The total admission ratio in Children's Hospital is 60 colored to 40 white children.

There was a preponderance of males (70 per cent). Of the negroes 60 per cent were males, and of the white patients 71 per cent were males. The ratio of males to females is therefore more than 2 to 1, for which there is no apparent explanation.

Only 3 patients were admitted during the first day of the illness and 1 was admitted as late as the 24th day. The average was 5½ days. The third day of illness was the most common, when 20 patients (27 per cent) were admitted. Eighty-two per cent of patients were admitted during the first week of illness. One patient arrived about 4 hours after the onset of symptoms with a temperature of 101°F., a stiff neck, a white blood cell count of 11,600 with 68 per cent polymorphonuclears, and a spinal fluid with 105 cells, 60 per cent of which were segmented. This turned out to be a nonparalytic case.

The average temperature on admission was 100.7°F. and ranged between 104°F. and normal. In only 22 cases or 31 per cent was the temperature on admission under 100°F.

The white blood counts on admission varied from 18,000 to 5,900 with an average of 9,450.

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The percentage of polymorphonuclear cells ranged from 24 per cent to 88 per cent with an average of 60 per cent. Only 14 per cent of the counts showed a lymphocytic predominance. Forty per cent showed eosinophils.

The spinal taps were very interesting because of their variation. The cell counts varied from 1,250 to less than 1 cell. The average of all counts was 98 cells. Thirty-three per cent had a hundred or more cells. The percentage of segmented cells varied between 86 per cent and zero with an average of 37 per cent. Only 13 spinal fluids showed a predominance of segmented cells. Of most interest is the fact that in 7 cases or 10 per cent of the total the cell counts on admission were normal in paralytic cases.

A study of the signs present on admission shows that 19 patients or 26 per cent were diagnosed as having preparalytic poliomyelitis. Only 7 of these developed paralysis subsequently, 5 of whom left the hospital with residuals.

The most common sign elicited on admission was stiffness of the neck (60 cases or 81 per cent). The next most common finding was weakness of one or more extremities (44 cases or 60 per cent). The third most common sign on admission was absence of one or more deep reflexes (25 cases or 34 per cent). Superficial reflexes were absent in 19 per cent. The back was mentioned as being stiff in 16 per cent, and the muscles were tender in 10 cases. The other signs and symptoms noted on admission are listed in table 1.

In classifying the cases according to symptoms 49 cases or 66 per cent could be designated as of the spinal type, 12 cases or 16 per cent as of the bulbospinal type, and 13 cases or 17 per cent as of the nonparalytic or abortive type.

The cases may be classified also according to other prominent symptoms: Marked stupor was noted in 4 cases, 2 of the bulbar type and 2 with respiratory paralysis. The stupor persisted from 24 to 48 hours in each case, and in 1 case with respiratory paralysis the stupor was associated with general exacerbation of all other signs and finally collapse. A cisternal tap was performed while the patient remained in the respirator and was followed by marked improvement of her general condition.

Five of the cases could be classified as the meningeal type. Four of these were suspected of having tuberculous meningitis.

There is a type of poliomyelitis described in which pain and tenderness is particularly striking. There were 9 such cases (12 per cent). In each of these, pain and tenderness of the lower extremities was marked, suggesting the diagnosis of acute rheumatic fever in 1 case and necessitating roentgenograms to rule out bone and joint pathology in 2 other cases.

TABLE 1

Signs on admission

SIGNS	NO. OF CASES	PERCENTAGE
Stiffness of neck	60	81
Weakness of one or more extremity	44	60
Absent deep reflex or more	25	34
Stiffness of back	12	16
Absent superficial reflex or more	14	19
Nasal twang	8	11
Tenderness of muscles	9	12
Pharyngeal weakness	7	9
Regurgitating fluids through nose	6	8
Weakness of back	4	5
Weakness of neck	2	3
Weakness of face	2	3
Bladder involvement	2	3
Intercostal weakness	2	3
Abdominal weakness	2	3
Weakness of tongue	1	1.5
Weakness of diaphragm	1	1.5
Stupor	1	1.5
Twitching of mouth and arm	1	1.5

There were 3 cases in which gastrointestinal symptoms were most prominent, white boys 13, 4 and 2 years old. The younger 2 of these were admitted as cases of bacillary dysentery and both had positive stool cultures showing the presence of B. Shigella dispar. Because of stiffness of the neck, however, spinal taps were done, and one showed 60 cells and the other 85 cells. One of these patients later developed weakness of the right leg; the other patient had no paralysis, but the virus was isolated from the stool at the National Institute of Health. In the first of these 2 cases tuberculous meningitis was suspected and the Levinson test on the spinal fluid was reported as positive, but repeated tuberculin tests and the subsequent course ruled out this possibility.

Five patients required respirators. This represents 7 per cent of all the cases, an unusually high figure. Four were male and 1 female, and all were white. The ages ranged from 4 years to 16 years. One patient required the respirator only 4 days, another 10 days, another 13 days, and a fourth 19 days, while the fifth, an 8-year-old female, required 45 days and was out 3 weeks when she returned with a respiratory infection and atelectasis of the right lower lung. She was put back into the respirator and died 2 weeks later. Her intercostal muscles were practically all paralyzed and she had been unable to cough productively. She happened to be the first respirator case of the year. She was admitted on August 16 on the fourth day of her illness and was immediately put into the respirator. Her intercostal and accessory respiratory muscles and both legs were paralyzed. She improved rapidly until a week after admission, when she became stuporous, had generalized convulsions, and developed a rapid thready pulse and seemed doomed; however, she responded to cisternal tap, rapidly improved again, and was out of the respirator after 45 days, but never regained function of all of her intercostal muscles. She was sent home only to return with her fatal complication. She was the only patient who died. The mortality rate for the group of 74 was therefore 1.5 per cent or 20 per cent for the respirator cases.

The bulbospinal cases numbered 12 or 16 per cent of all the cases. This is almost three times the usual percentage noted during epidemics, which is usually 6 per cent. The bulbospinal is the most severe and fatal type of poliomyelitis. In 1935, 3 of the 4 bulbar cases died, whereas none have died in this series. This type demands the closest attention and most careful nursing care.

Two of the bulbospinal patients had tonsillectomies performed prior to onset of the disease, 18 and 10 days before. The operations were done in a doctor's office in the first case, and in a local hospital in the other case. Bulbar symptoms disappeared in both cases but residuals persisted in the extremities.

The first case admitted last year was bulbar in type and was sent in as a case of diphtheritic laryngitis.

TABLE 2

Distribution of paralysis—61 cases

INVOLVEMENT	NO. OF CASES	PERCENTAGE
One leg	18	30.0
Both legs	10	16.5
Combination arms and legs	10	16.5
Legs and trunk	5	8.0
Whole body	3	5.0
One arm	5	8.0
Both arms alone	0	0.0
Arms and trunk	0	0.0
Trunk alone	2	3.5
Cranial nerves alone	6	9.8
Cranial nerves and extremities	5	8.5
Cranial nerves and neck	1	2.0
Bladder disturbance	9	15.5

Table 2 shows the distribution of the paralysis of the 61 cases. The most common involvement was paralysis of 1 leg (18 cases). The next most common was paralysis of both legs (10 cases) and a combination of paralysis of legs and arms (10 cases). The legs and trunk were involved in 5 cases and the whole body in 3; thus 1 or both legs were involved in 46 of the 61 cases with any weakness or paralysis, or 76 per cent of paralysis cases with leg involvement.

The other interesting thing about this table is the number of cases with bladder involvement, usually retention. One patient had 38 ounces of retained urine.

Twelve of the paralysis cases have had complete recovery to date; thus, 20 per cent of the involved cases have no residual. This number added to the 12 abortive cases gives 34 per cent of the 70 cases with complete recovery.

Treatment was mainly supportive with absolute bed rest. Early orthopedic consultation was procured in each case, and the involved parts were put at rest by the use of splints, sandbags, etc.

Constipation, the most common complication, was relieved by mineral oil and enemata. Aspirin and codeine relieved the painful symptoms. Increased intracranial pressure was relieved in 1 case by cisternal tap. Tube feeding was necessary in some of the bulbar cases. These patients also required pharyngeal aspiration of mucus, and many were given fluids parenterally.

Respiratory cases with involvement of the intercostal muscles, the diaphragm, or both intercostal muscles and diaphragm are definitely helped by the Drinker respirator, while bulbar involvement contraindicates the use of a respirator.

Whole blood given intramuscularly and plasma were used in only 1 case without any benefit. This case was the only fatal one.

One of the patients, a white male of 6 years, had had poliomyelitis antiserum at the age of 4 months. He was transferred from Sydenham Hospital in Baltimore, where he was found to have weakness of the right arm and some respiratory distress. He made an uneventful recovery and was discharged 2 weeks from the onset without any residual.

Two of the earliest patients were admitted within 24 hours and both lived in Alexandria, Virginia, but had no common contacts. One was colored and 1 was white. Both had left leg involvement and both had had German measles 3 weeks before.

Two other patients gave a history of having been vaccinated 3 weeks before the onset of the poliomyelitis. One of these developed erythema multiforme immediately after the vaccination, and it persisted into the present illness. Paralysis did not develop until about a week after the onset and then only in both quadriceps femoris muscles. The other patient did not develop any paralysis.

One patient was sent in because the child aged 5 years had been exposed a week before to a proved case in a child aged 2 years. Examination revealed only a temperature of 102.2°F., but there were 30 cells in the spinal fluid, 46 per cent of which were segmented polymorphonuclears. She made an uneventful recovery.

Two of the patients had siblings who died of poliomyelitis during this epidemic. One was a $11\frac{1}{2}$-year-old white boy from Chevy Chase, Maryland with paralysis of both legs; his older brother died several days later at another hospital with bulbar poliomyelitis. The other was a 6-year-old white male admitted from Linton Hall, Bristol, Virginia where 4 cases developed. This child was admitted with weakness of the right leg. His older brother had dropped dead at the same school the day before without any prodromal symptoms. The body was brought to Children's Hospital for autopsy and the diagnosis of acute fulminating anterior poliomyelitis was confirmed.

Another school outbreak was suspected at Episcopal Home here in Washington when 2 patients were admitted from that Home in 1 day, but no other cases developed.

Thus it may be seen that we have had rather an extensive epidemic but have been extremely fortunate in the results.

REACTIONS FROM THE TRANSFUSION OF UNPOOLED LIQUID HUMAN PLASMA*

Analysis of 1500 Transfusions

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THE efficacy of the use of human blood plasma parenterally is a well accepted fact. It is also well known that without typing or cross-matching plasma may be given intravenously, subcutaneously and intramuscularly with a minimum of reactions and complications.

Many types of plasma are used today. Good results have been reported with serum and with liquid, frozen, concentrated and desiccated human plasma.[1–9]

For the past 4 years I have participated in investigating the use of liquid human plasma in surgical and medical conditions.†

The plasma studied has been prepared by 2 methods. One is a closed system (Baxter Laboratories).‡ In this method blood is drawn into vacuum bottles, centrifuged, and the supernatant plasma drawn into and stored in vacuum bottles as unpooled, diluted or undiluted plasma, at room temperature without the addition of any preservative or bactericidal agents. A scrupulous aseptic technic is maintained throughout this preparation. The sterility of the finished product is insured by immediate culturing after preparation and repeated culturing during the period of storage. The period of storage is varied from 1 day to 2 years.

The other method of preparing plasma is an open one. This plasma is decanted or siphoned from outdated banked blood into an Erlenmeyer flask and is used immediately or stored for no longer than 48 hours at 4°C. No preservative is added to this plasma and no bacteriologic tests or cultures are made to determine sterility.

Other workers in the field of plasma research have advocated the pooling of plasma before administration intravenously to avoid any reactions which may occur from the presence of a high titre of agglutinins.[1, 2, 3, 4, 9, 10]

It is the purpose of this paper to describe the reactions which resulted from 1,500 consecutive intravenous infusions of liquid human unpooled plasma. All of the infusions were carried out and personally observed by me throughout the entire period of administration. This point is mentioned to show that the findings presented are those of one individual, thus eliminating the important item of varying personal interpretations of transfusion reactions when plasma is given by numerous people (interns, residents and staff doctors).

The plasma was given by a filter-drip method, with varying rates of flow. Often the rate of administration was governed by the individual need and tolerance of the patient. This was particularly true in cases of shock. Five hundred cubic centimeters was given to some patients in 20 minutes; for others, 1 to 2 hours was required for the same amount. As an average time, 40 minutes to 1 hour was required for the infusion of 500 c.c. of plasma.

The amounts injected at one time were also extremely variable. As much as 4,000 c.c. of plasma was given at one continuous intravenous drip. There have been many cases that received 1,000 to 2,000 c.c. of plasma. An average figure for the amount given at one time was approximately 500 c.c.

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* This paper, presented before the Society on House Officers' Night, March 25, 1942, received honorable mention.

† This work is part of a program under the direction of Dr. Charles Stanley White, Head of the Department of Surgery, Gallinger Municipal Hospital.

‡ This plasma was prepared by Miss Mary T. Sproul, M.A., M.T., who is now with the Plasma Division of the United States Army Medical Corps, Walter Reed Hospital, Washington, D. C.

There were 15 reactions in 1,500 consecutive intravenous injections of plasma. This gave a reaction rate of 1 per cent. There were no fatal or very severe and complicated reactions.

The patients, age of the plasma, method of preparation, indications for the use of plasma, degree and description of the 15 reactions are listed in table 1.

TABLE 1

Reactions from plasma infusions

NO. OF REACTION	NO. OF PATIENT	DAYS OF STORAGE OF PLASMA	METHOD OF PREPARATION	INDICATION FOR USE OF PLASMA	DEGREE AND TYPE OF REACTION
1	1	4	Closed	Maintenance of nitrogen balance in postoperative patient (herniorrhaphy)	Mild chill
2	1	15	Closed	Same as above	Mild chill
3	2	15	Closed	Same as above	Mild chill
4	2	45	Closed	Same as above	Mild chill
5	2	60	Closed	Same as above	Mild chill
6	2	100	Closed	Same as above	Mild chill lasting 10 minutes and itching
7	3	90	Closed	Maintenance of nitrogen balance in postoperative patient (aplastic anemia; exploratory laparotomy)	Chill occurred 30 minutes after injection
8	3	90	Closed	Same as above; severe anemia	Severe chill lasting 20 minutes
9	3	150	Closed	Maintenance of nitrogen balance in postoperative patient (aplastic anemia; exploratory laparotomy)	Chill lasting 15 minutes
10	4	45	Closed	Postoperative support (gastric resection)	Simulated an agglutinating type?*
11	5	7	Closed	Shock and hemorrhage	Mild chill
12	6	3	Open decantation from outdated banked blood	Shock (postoperative)	Mild chill temperature of 104°F. after 75 c.c. injected culture showed Staphylococcus albus
13	7	1	Open decantation	Hypoproteinemia and septic pelvic peritonitis	Moderate chill ½ hour after injection for 20 minutes; temperature rose to 104°F. Patient septic before infusion. Subsequent infusions of plasma gave no reactions.
14	8	1	Open decantation	Surgical shock	Mild chill
15	9	1	Open decantation	Sepsis; hypoproteinemia	Urticaria; wheels; slight dyspnea

* After receiving 75 c.c., complained of pain in back, difficult breathing, rise in pulse rate, drop in blood pressure of 15 mm. Hg. Injection stopped, and all symptoms disappeared in 15 minutes. Urine repeatedly negative for free hemoglobin.

It is difficult to describe the etiology of the reactions which occurred in patient no. 1. He received 26 infusions of plasma during the course of the study of the utilization of plasma proteins. He was a healthy colored male except for the herniorrhaphy. Pyrogens may have been the etiologic factor.

Patient no. 2, a colored male, was also studied for the utilization of plasma proteins. He was an extremely nervous patient who was afraid of "needles." He often complained of being "chilly" when he was being prepared for the infusion of plasma. The itching which occurred in reaction no. 6 was not accompanied by hives or any other manifestation of an allergic reaction.

Patient no. 3 was a very sick colored male, who was explored for a possible carcinoma of the cecum as an explanation of his severe anemia. This patient reacted 3 times to 16 plasma infusions. The patient also received more than 40 blood transfusions during his entire stay in the hospital; the incidence of reaction with whole blood was 26 per cent. In a study of whole blood transfusions at the Gallinger Municipal Hospital, it was found that reactions frequently occurred in patients with blood dyscrasias. It is possible that there is a diathesis to reactions from foreign proteins in patients with blood dyscrasias. The exact etiology of this patient's severe anemia was not ascertained. He was thought to have an atypical aplastic erythroblastic anemia.

Reaction no. 10 in patient no. 4 was the only one which simulated an agglutinating type. The plasma was given as a postoperative support on the second day following a subtotal gastric resection. The reaction occurred after giving 75 c.c. of sterile, undiluted type A plasma. The symptoms, in their order of appearance, were pain in the lumbar region, "a sharp sticking pain," dyspnea, tachypnea, rise in pulse rate to 130, drop in blood pressure of 15 mm. Hg. (from 130/70 to 115/70), and flushing of the skin. The infusion was discontinued and $\frac{1}{4}$ grain of morphine was given. All adverse symptoms disappeared in 15 minutes. Repeated urinalysis was negative for free hemoglobin. The patient's plasma also did not reveal any hemolysis. The rate of administration was approximately 15 minutes for the 100 c.c. The patient's blood was type A. Later in the same day the same plasma which caused the reaction was administered at the rate of 70 drops per minute without any incidence of reaction or hemolysis of the recipient's cells. Careful bacteriologic study of the plasma did not reveal any evidence of contamination. The etiologic factor of this reaction is unknown. However, it may have been due to an undetermined vasotonin.

Reaction no. 12 in patient no. 6 was caused by contaminated plasma. The plasma used was prepared from outdated banked blood and stored at 4°C. for 3 days. The reaction occurred after the injection of 75 c.c. Bacteriologic studies showed Staphylococcus albus to be the contaminant. This reaction was undoubtedly due to foreign protein and toxic substances caused by bacterial growth. The patient did not develop a septicemia and made an uneventful recovery. This reaction occurred during the early part of 1939.

Reaction no. 13 in patient no. 3 is not definitely attributable to the plasma. The patient had a septic pelvic peritonitis with hypoproteinemia. The reaction occurred after the infusion of 300 c.c. of plasma. The patient had had hives and hyperpyrexia previous to the infusion. Subsequent infusions gave no reactions. It has been my experience that very septic patients are rather frequently prone to chills and hyperpyrexia with intravenous therapy.

Reaction no. 15 was typical of the allergic type. Fifteen minutes after the infusion of the plasma the patient complained of itching. A few minutes later she developed wheels, edema of the eyelids, and slight dyspnea. These symptoms were relieved by a small dose of adrenalin and disappeared in 16 hours. This plasma was 1 day old and was prepared from blood 2 days old. Thus the age of the plasma was 3 days. The plasma was milky and contained a large amount of lipoids. The blood had probably been donated very soon after the ingestion of food. Allergic reactions decrease in almost direct proportion to the days of storage of liquid plasma at room temperature. The recipient gave a typical history of allergy to foods, dust, etc.

It seems plausible that some patients have a diathesis for reactions to foreign proteins regardless of the type injected. This condition may account for some of the unexplained reactions. Chills and pyrexia are most frequently caused by pyrogens. Most mild reactions will be eliminated if a scrupulously aseptic technic is maintained in the preparation of the plasma, and if a thoroughly definite and well supervised procedure is followed in the preparation of equipment and solutions used in conjunction with the administration of plasma. The use of a completely closed and simple system for the preparation and storage of sterile liquid plasma, to be stored at room temperature without the addition of any preservative, is essential. The slightest contamination during the preparation period will be multiplied many times during the period of storage. Careful and repeated bacteriologic studies of stored plasma are imperative to insure sterility. Contaminated plasma is very toxic when injected intravenously. Allergic reactions are infrequent but may be avoided, or the rate reduced, by the use of fasting donors or the storage of plasma for long periods at room temperature. Eighty per cent of all the plasma studied in this series was prepared by a closed system and stood without preservative at room temperature. The length of storage did not seem to increase the reaction rate. The reaction rate was the same for the plasma prepared by the closed and open methods. However, the types of reaction which resulted from the plasma prepared by the open system are more serious and dangerous than those prepared by the closed. Even after pyrogens, contaminants, lipoids, foreign proteins, individual diatheses, vasotonins, and high titre agglutinins are eliminated as possible etiologic factors in plasma transfusions, there will probably be an occasional reaction without full explanation.

TABLE 2

Classification of types of reaction

TYPES OF REACTIONS			NUMBER OF REACTIONS
Type I	Possible Agglutinating?		1
	Pain in back		
	Dyspnea		
	Headache		
	Tachycardia		
	Drop in blood pressure		
Type II	Allergic		1
	Urticaria		
	Edema of face		
	Slight dyspnea		
Type III	Chills and Pyrexia		13
	Mild		
	Chill 15–30 minutes	(10)	
	Fever 100°–102°F.		1
	Moderate		
	Chill 30 minutes to 1 hour	(2)	
	Fever 100°–102°F.		
	Severe		
	Chill 1 hour or more	(1)	
	Fever 103°–105°F.		

Table 2 presents an attempt at classification and a brief description of the 15 reactions discussed above.

CONCLUSIONS

1. An analysis of 1,500 consecutive intravenous injections of unpooled liquid plasma that was stored at either room temperature or at 4°C. without any preservative is presented.

2. There was a total of 15 reactions in this series, or a 1 per cent incidence. The individual incidence of reaction was 0.6 per cent. There were no fatal or serious reactions in this series.

3. An attempt has been made to classify the types of reactions which occurred.

4. It is not always possible to elicit the etiology of transfusion reactions. Some of the causes of reactions with plasma may be avoided by:

A. Use of fasting donors.

B. Use of a completely closed and simple method for preparation, storage, and repeated bacteriologic studies to insure sterility.

C. Use of an accepted, thorough, well defined

(*Continued on page 246*)

THE INFLUENCE OF THE BACTERIAL FLORA ON THE CULTIVATION OF ENDAMOEBA HISTOLYTICA*

BEN D. CHINN, PH.D., M.D.

Junior Medical Officer, St. Elizabeths Hospital

SUMMARY

1. Twenty-nine species of bacteria (44 strains) were tested with regard to their ability to cause excystation and growth of Endamoeba histolytica in vitro. A heterogeneous group of 14 species of bacteria were found capable of doing so when each was cultured with sterile cysts. The bacteria having the property of inducing excystation and multiplication were Leptotrichia buccalis, Clostridium perfringens, Staphylococcus aureus, Salmonella schottmülleri, Streptococcus hemolyticus, Streptococcus faecalis, Streptococcus viridans, Bacillus subtilis, Bacillus mesentericus, Actinomyces muris, Aplanobacter stewartii, Bacterium coronofaciens, Serratia marcescens and Neisseria catarrhalis. Some of the intestinal bacteria such as Escherichia coli and Alcaligenes faecalis could not initiate growth of amebae from cysts.

2. The growth relationships of the amebae to the bacteria were determined. During the most active period of multiplication of the amebae the bacteria were sharply reduced in number and were ingested by the amebae.

3. The effect of a mixed bacterial flora was studied. Growth was greatly stimulated in some cases when a second or third species was added to an ameba culture already growing with 1 species of bacterium.

4. Encystation was produced when Clostridium perfringens, a bacterium uniformly present in the human colon, was added to cultures containing one or two other species of bacteria. Cultures containing Clostridium perfringens, Streptococcus hemolyticus and Leptotrichia buccalis or Clostridium perfringens and Streptococcus hemolyticus were particularly good cyst producers. Such cultures were uniformly rich in trophozoites but the cysts varied from 5 to 40 per cent.

5. It is felt that the bacteria play a significant role in the excystation, multiplication and encystation of Endamoeba histolytica and studies of the bacterial action may lead to a knowledge of the conditions necessary to cultivate Endamoeba histolytica without bacteria.

Report sulfadiazine is effective for influenzal meningitis. Complete recovery of 5 of 7 children under 4 years of age from the highly fatal condition, influenzal meningitis, by treatment with sulfadiazine, a member of the sulfanilamide family of drugs, is reported in *The Journal of the American Medical Association* for May 23, 1942 by WALLACE SAKO, M.D., CHESTER A. STEWART, M.D., AND JOEL FLEET, M.D., New Orleans.

Influenzal meningitis is an inflammation of the membrane enveloping the brain and spinal cord caused by the bacteria Hemophilus influenzae, formerly thought to be the primary cause of influenza but now generally accepted as a secondary invader in complicated cases of influenza which in itself is caused by a virus.

One of the 7 children treated apparently died from a surgical procedure rather than the meningeal infection, the authors say, and the other child died after premature stopping of the sulfadiazine treatment and the contraction of chickenpox.

The three physicians say, "Various reports have emanated from Charity Hospital [New Orleans] reviewing the cases of influenzal meningitis. Tripoli in 1936 stated that 20 cases of influenzal meningitis seen from 1925 to 1934 were all fatal. Aleman in 1940 reported that from 1935 to 1939 inclusive 27 cases were treated with no recoveries. Bryan and Musser in 1941 remarked that for the past five years there had been 57 cases of influenzal meningitis treated with two recoveries. Forty-five of these cases occurred in children under 3 years of age with one recovery, this being in an infant 11 months old. . . .

"These reports reveal how gloomy the outlook for influenzal meningitis may be. . . . As far as we are aware there are no reports in the literature relative to the use of sulfadiazine in influenzal meningitis. . . ."

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* Summary of paper, presented before the Society on House Officers' Night, March 25, 1942, which was awarded second prize.

Editorials

DISTRICT PHYSICIANS REGISTER

In years to come, May 12, 1942 will be remembered by historically-minded physicians in the District of Columbia as the date on which they registered for military or other service in World War II. Medical Society members will also recall that the registration was the first inventory of medical personnel in the Society's long history.

The primary purpose of the registration was to determine how many physicians were engaged in private practice and the number which could be provided the military services without jeopardizing medical care for the civilian population. The response to the appeal of the District Procurement and Assignment Committee to all physicians licensed to practice medicine in the District of Columbia to register was fully up to expectations, 1,217 white and colored practitioners responding.

The registration was no small undertaking and the coöperation of hospitals and laymen was sought. The Office of Civilian Defense for the Metropolitan Area provided clerks, two serving at each of the following hospitals, where registration was conducted from 9:00 a.m. to 6:00 p.m.: Casualty, Children's, Columbia, Doctors, Episcopal, Emergency, Freedmen's, Gallinger, Garfield, George Washington, Georgetown, Homeopathic, Providence, Sibley and St. Elizabeths. There was also a registration desk at the Medical Society's headquarters. Although complications were expected, surprisingly few were encountered.

It was interesting to note the reaction of physicians, particularly at the Medical Society's headquarters where many of the older practitioners registered. Without exception they were very anxious to serve and many stated that although they had retired, they proposed to return to practice if their services were needed. Younger physicians were equally responsive although a few were unsure of themselves, not knowing exactly what they should do. It was a most encouraging display of loyalty and of a desire to be of service to the country.

It is apparent from the number registering that there are still those who have failed to do so for one reason or another. A few called the Society's headquarters stating that they had been ill or out of the city. The Procurement and Assignment Committee has announced that physicians can register at the Society's office until July 1. After that date forms will be completed for those who have failed to register. This may prove disadvantageous to the individuals involved but the Committee will have no alternative as its records must be as complete as possible.

An analysis of the data obtained in the registration has been made so that the Committee can act intelligently. At best the task is a difficult and in many respects a thankless one. However, the Committee has resolved to do its duty as it sees it. The manner in which it functions is described in the War Section of this issue of the Medical Annals.

Considering the many personal factors involved and the difficult decisions physicians were called upon to make, the registration held on May 12 reflects great credit on the profession in this community.

RATIONING RESPONSIBILITIES

The regulations for the rationing of tires and gasoline have conferred certain privileges on the members of the medical profession but, and this sometimes is not fully appreciated, they have also imposed responsibilities which are fully as important as any privilege.

To understand the nature of their responsibilities as well as their privileges, it is essential that doctors be familiar with rationing regulations which have been in effect for some time. The number of telephone calls received by the Secretary of the Medical Society for information indicates that this is not the case. In particular, there seems to be confusion as to the eligibility requirements for new tires and tubes. Applications have been denied in many cases because of failure to establish need.

The regulations issued by the Office of Price Administration to the Local Rationing Board provide that no certificate to purchase a new tire or tube may be issued unless both eligibility and need have been established. Eligibility qualifications, as applicable to doctors, require that the applicant must show that the new tire or tube for which application is made is to be mounted on a vehicle which is operated by a doctor and which is used by him principally for professional service. Furthermore, the local board is permitted to issue certificates only for vehicles of doctors whose professional practice requires the making of calls outside their offices, and the particular car for which the new tire or tube is sought must actually be used principally for making professional calls.

As a further step in establishing need, the applicant must show that the vehicle on which the new tire or tube is to be mounted cannot be replaced by another vehicle owned, operated or under the control of the applicant, and which is equipped with serviceable tires and tubes. In other words, this means that if you have in your family more than one car, whether registered in your name or not, the additional car or cars are presumed to be subject to your control, and you cannot establish need while this alternative means of transportation is available to you.

In general, the same principle applies to gasoline. Doctors have been issued "X" ration cards entitling them to make unlimited purchases of gasoline. This does not mean that they are privileged to use this fuel in any way they see fit. On the contrary, aside from the supply necessary to carry out their professional duties, they are expected to conform to the same rules as have been laid down for other citizens.

This is a matter in which every doctor has a solemn responsibility—to himself, to his profession, and to his country. Rubber and gasoline, particularly the former, are essential to the successful conduct of the war. This country's reserve stock of crude rubber is very limited and probably cannot be replaced in any form for several years. For these reasons, all doctors must balance their privileges against their responsibilities, and at all times the emphasis should be placed on the latter.

John F. Preston, M.D.

THE HEALTH OF OUR YOUTH

The medical profession should take a leading part in the effort to better the physical well-being of the youth of our country; none are better fitted to do it than we are.

Our school system from the first grade to the senior year in the colleges and universities demands too much of the students. Sufficient time is not allowed for the necessary physical care and training of the student body. The hours in the classrooms are too long and the periods for physical relaxation too short and too few.

Is not the physical training of the student body of equal importance to their mental training? In after life it may perhaps be more so. There is no well ordered and properly carried out plan for physical training of the student body as a whole. Why cannot the teachers and professors line up their classes and put them through setting-up exercises? It would be advantageous to both. The precept and example of the professor counting one, two, three, four would be of much value psychologically as well as physically to the students and to the professor.

No one knows so well as the medical profession how the nervous systems of our youths are being damaged by the lack of proper physical care. Not only are they nervous as a result of lack of physical training but also as a result of insufficient rest. The hours of study necessary to prepare their tasks are too long for the growing bodies of adolescents. Youth requires a sufficiency of rest, of physical recreation and time to think. They have time for none of these in proper amount. I can name many students both male and female from the private and public schools all over this land who are below par in health as a result of the negligence of the proper physical care. By proper physical care is meant out-of-door exercise, sunshine, recreation, play and rest. Many students have told me, particularly from the girls' schools, that they are not out of doors at all from November to April or May inclusive. This is little less than criminal negligence on the part of the schools. The students suffer from headaches, eye strain and in many cases lasting injury to their eyes as a result. More serious than this their health suffers and not infrequently is permanently impaired.

The parents of these children complain bitterly of the situation and ask what can be done about it. They can do nothing. I know of none who can do anything about it save the medical profession and it is past time that we should do it. We are, generally speaking, a nation of drug-takers; sedatives to produce sleep when a quiet walk would do it much better; laxatives for constipation when proper exercise and food would make unnecessary this vicious habit; stimulants to drive an already overtaxed and fatigued nervous system. Our national life in this regard is very faulty indeed.

There is no excuse for not taking daily exercise. It is a bad plan to take no exercise during the week and then overdo it on the weekend. Many a heart is damaged by so doing. It is a vicious system in effect in our colleges and universities which trains only the few and neglects the student body. The heads of these institutions are presumably intelligent men and women. Why do they do it? They must know better; therefore one must surmise that they do it for a selfish reason. Is it for the advertisement of their institutions, at the expense of the well-being of their students? For shame that such a thing should be! Now that we face a war in which our very lives and homes and all that we hold dear are at stake, cannot and will not the educational institutions awaken to their duty to our youth? If they do not do so voluntarily they will be called upon to do so by public opinion and by a more arbitrary force. It will necessitate changes in the entire educational system and it is past time that this should be done.

Shorter curricula and more thorough mastery of the subjects rather than a great mass of matter, which only a certain type of mind can encompass in the time allotted (such minds are not necessarily the best by any means and yet this is the criterion set up); more time given for exercise in the open, calmer sports, less competitive athletics on the present scale; a saner sort of existence for our sons and daughters, is the crying need in our schools.

The study requirements are placed on a level with the type of mind that can scan a subject and get it very quickly. Such a mind may not be a good one and more often is unstable and superficial, yet this is the level that all must obtain in order to stand high or be considered a good student. They are about 5 per cent of the student body by rough estimation. Are the 95 per cent of the remaining students to be made to feel they are dull and given an amount of study to do that effectually prevents them from having sufficient time for physical training? No system could be more stupid, but this is what is being done. Why will not the civilian school authorities look at the students in our naval and military academies? Sound minds in sound bodies; boys who stand up and look you in the eye; boys who are taught character and physical stamina as part of their education. Why will our school authorities not note the wonderful schools of Switzerland where the physical training and the mental training and the character training go hand in hand? Is mere smartness the sole criterion upon which to base our estimate of a student or of a man or woman?

Is he or she vigorous and strong and sane and sensible and has he or she character? Alas, not too many will measure up to these standards and we do need them so very badly now.

William Thornwall Davis, M.D.

ENRICHED BREAD AND FLOUR

Much has been said in recent months about enriched bread and flour. Leaders in the field of nutrition have advocated them as products of superior quality and they have been advertised as such by millers and bakers everywhere.

If these activities continue, they may bring about important changes in present methods of producing flour and bread and in the quality of baked goods consumed. These changes may also have a far-reaching influence on the health of the populace. Since this holds special interest for the medical profession, a brief description of these products may not be amiss at this time.

It is generally accepted that bread made of whole wheat flour, which contains all the elements present in the wheat berry, is superior in quality from a nutritional point of view to bread made of ordinary refined white flour. Many nutrients essential to health are removed in the milling process. Except for the presence of roughage in the form of bran, which is not well tolerated by some, no one will question the superior nutritional value of genuine whole wheat products.

Unfortunately, consumers generally do not seem to like whole wheat bread. In spite of many efforts to popularize this product, more than ninety per cent of the bread consumed in the United States is white bread. Since wheat flour constitutes about twenty-five per cent of the total food calories in the American diet, there is definite need for a better quality of white flour products.

Medical and nutritional scientists have studied this problem for a long time and have come to the conclusion that the immediate solution depends on the introduction of a more nutritious white flour and bread. That has been made possible through the coöperative efforts of the Food and Nutrition Board of the National Research Council, the Food and Drug Administration, and the leading millers and bakers of the country. They have jointly embarked on a program of producing enriched flour and bread and encouraging consumers to use these newer products.

Enriched flour and bread are white flour and bread enriched or reinforced, if you prefer, with some of the nutrients removed in milling white flour. The nutrients restored under present regulations are thiamin chloride (vitamin B_1), niacin (nicotinic acid) and iron. Future regulations may require the restoration of other factors, perhaps riboflavin, calcium and phosphorus.

The term enriched has been adopted by the Food and Drug Administration to indicate that flour and bread so labelled and marketed shall contain certain minimum amounts of the nutrients specified, which is somewhat less than is ordinarily present in a good quality of whole wheat flour. Enriched flour may be made by adding the specified nutrients in synthetic form to white flour or by retaining them in the flour through improved milling methods. Bread made of enriched flour is enriched bread. It may also be made from ordinary white flour with the use of a special high vitamin yeast in baking or by adding some other approved concentrate to the dough.

Any one of these methods or a combination of them is acceptable provided the final product meets the minimum requirements for enriched flour and bread. It will be some time perhaps before it is definitely known how well the regulations governing the enrichment program can and will be observed by the millers and bakers of the country.

Milling methods have been developed, although still in the process of improvement, making it possible to produce a white flour which retains about eighty-five per cent of the entire wheat berry. Only seventy per cent or less is retained in ordinary white flour. This newer product is commonly known as long extraction flour. It has a creamy yellow color but is still classed as white flour. It indicates how the milling industry is trying to produce a better grade of white flour.

It is well to keep in mind that not all dark breads are genuine whole wheat. Most of them contain only from twenty to forty per cent whole wheat flour. Consumers who want genuine whole wheat bread should be instructed to examine the label on the wrapper carefully.

The enrichment program is without doubt a step in the right direction. It is hoped that physicians will encourage the public to use these newer products. Those who prefer white bread should use enriched bread. Those who do their own baking should use enriched flour.

William DeKleine, M.D.

PERTINENT PARAGRAPHS

May Meetings

Although summer is approaching, there has been no letup in the Society's activities, particularly those relating to the war effort. The prospect of there being a lull is remote, for the Society is gearing itself for greater responsibilities in the coming months.

The following meetings were held in May:

May 6	Annual Business Meeting of Society
May 7	Medical Bureau Committee
May 8	Committee on Procurement and Assignment
May 13	Scientific Meeting of Society
May 18	Postgraduate Lecture
May 19	Subcommittee on Mental Health Committee on Procurement and Assignment
May 22	Section on Ophthalmology and Otolaryngology
May 23	Section on Pathology and Laboratory Medicine
May 25	Postgraduate Lecture
May 26	Executive Board
May 27	Committee on Procurement and Assignment
May 28	Section on Pediatrics
May 29	Special Scientific Meeting of Society

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Society Responds to Government's Request

In a recent communication from the Executive Office of the President, Mr. Charles E. Mills, Personnel Officer of the Office for Emergency Management, inquired if the Medical Society of the District of Columbia could establish a maximum fee for physical examinations of employees required by the Civil Service Commission before entrance on duty. Mr. Mills said that many thousands of Federal employees come to Washington without such examinations and it was therefore necessary to refer them to private physicians. He called attention to the fact that there was a lack of uniformity in fees charged by local physicians and that for employees in the income group from $1,260 to $1,620 per annum, "it appears that a reasonable fee would be from two to three dollars for each examination."

The Executive Board, in a letter to the Society's membership, stated that it believed there were a number of physicians willing to be listed with the Society and MEDICAL BUREAU to make examinations at a fee not to exceed three dollars for the income group specified, and authorized a canvass of the members for this purpose. As this item was written on the date the letter was placed in the mails, returns have not been received. However, it is expected that a large number of physicians will indicate their desire to make examinations.

★

Registration of Diathermy Apparatus

Many inquiries have been received at the Society's office in regard to the new Government regulations requiring registration of diathermy apparatus. The following order (no. 96) issued by the Federal Communications Commission on May 18, 1942 will therefore be of particular interest to all physicians owning such equipment.

"Pursuant to the authority conferred on it by Order No. 4, dated April 16, 1942, of the Defense Communications Board, the Federal Communications Commission hereby orders every person or organization in possession of apparatus designed, constructed, or used for generating radio frequency energy for therapeutic purposes (hereinafter referred to as 'diathermy apparatus') to apply for registration of such apparatus with the Federal Communications Commission within 20 days from the date of this order in accordance with the following provisions:

(1) Application for registration shall be made on forms furnished by the Federal Communications Commission.

(2) Such application forms shall be obtainable from the Federal Communications Commission, Washington, D. C., or from any of the field offices of the Commission, ...

(3) Individual applications must be made for each set of diathermy apparatus to be registered; therefore, all requests for application forms should state the number of sets to be registered.

(4) All application forms should be returned to the Secretary, Federal Communications Commission, Washington, D. C. (not to the field offices).

(5) If, upon receipt of an application for registration, the Commission finds that sufficient and reliable information has been furnished, it will issue a non-transferable certificate of registration to the applicant.

(6) The applicant shall be responsible for having the certificate of registration conspicuously affixed to the diathermy apparatus for which it is issued.

(7) Any person or organization in any manner coming into possession of apparatus required to be registered under the terms of this Order shall apply to the Commission for a certificate of registration within 15 days after obtaining such possession.

(8) If diathermy apparatus for which a certificate of registration has been issued should be transferred, sold, assigned, leased, loaned, stolen, destroyed, or otherwise removed from the possession of the registrant (holder of a certificate of registration) he shall notify the Commission within five days thereafter of such loss, disposal, or disappearance, furnishing the name of the recipient of the diathermy apparatus if such person is known to the registrant.

(9) (a) Whenever the registrant of diathermy apparatus shall be the manufacturer thereof, he shall stamp on each set of such apparatus in his possession the name of the manufacturer and a serial number.

(b) Whenever any set of diathermy apparatus has impressed upon it, or it is in any way marked with the name of the manufacturer and a serial number, the registrant in possession shall be responsible for preserving such marking from obliteration, removal, or alteration.

(10) Any apparatus required to be registered for which there is no valid registration certificate outstanding, and any apparatus from which the name of the manufacturer and serial number shall have been obliterated, removed, or altered after the date of this order, shall be subject to closure and removal in such manner as shall be prescribed at the time by the Commission.

(11) The following apparatus shall not be subject to the registration provisions of the order:

Apparatus which is in the possession of the United States Government, its officers or agents; or apparatus which is under contract for delivery to the United States Government.

(12) Any person or organization having in his possession diathermy apparatus which is exempt from registration under paragraph 11 of this order, shall immediately apply for registration of such apparatus if for any reason such exemption shall cease to apply to such apparatus."

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Report of Activities 1941-1942

A copy of the 45-page Report of Activities of the Medical Society of the District of Columbia for 1941–1942, which was presented at the Annual Business Meeting, can be had by calling the Society's office. This comprehensive review setting forth the accomplishments of the past organization year will be enlightening to those who ordinarily are not in close touch with the Society's affairs. Activities of boards, committees and sections have been summarized in the briefest form possible, making it unnecessary for the physician to read lengthy reports. If further details are desired about any activity, they can be obtained from the Secretary of the Society.

Members cannot talk intelligently about their organization unless they know what has and is being done. Send for your report today.

★

Scientific Tests to Determine Intoxication

Various health organizations and civic groups have from time to time considered legislation providing for the use of scientific tests to determine the degree of intoxication of automobile drivers. For one reason or another, nothing has come of their deliberations.

At the present time, there is before the Congress a bill, H.R. 4194, which provides for such tests in the District of Columbia. The Medical Society's Committee on Public Policy has discussed this legislation and finally approved the bill in principle. However, the Committee recommended that this legislation be amended "to provide that a physician be employed to correlate clinical and laboratory findings and that a laboratory be established under the direction of a competent physician to make the necessary tests; further, that tests be made not only for intoxication from alcohol, but for intoxicating drugs as well."

The Executive Board was in accord with the position taken by the Committee and recommended endorsement by the Society. The Society gave its approval and Representative Jennings Randolph, Chairman of the House District Committee, has been notified of the action taken.

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Forum for Physicians in the Services

Washington physicians entering the military services have frequently called the Society's office requesting that the MEDICAL ANNALS be forwarded to them wherever they might be. It is perfectly natural that they should wish to keep in touch with what is happening at home. Physicians who remain in civil practice are equally interested in what happens to their colleagues and the progress which they make, scientifically and otherwise, in the service. There are, of course, restrictions on what physicians in the services can say or write. However, excluding this factor, there are contributions which they can make to the MEDICAL ANNALS. If a sufficient number send articles or communications of timely interest, they will be incorporated in a separate section of the ANNALS. It will be interesting to see what reactions there are to this suggestion.

★

Appointments to H. S. A.

The Medical Society's Executive Board submitted the following appointments to the membership of HEALTH SECURITY ADMINISTRATION at the Annual Business Meeting on May 6:

Truman Abbe
Harry S. Bernton
Charles J. Bowne

Leo T. Brown
James A. Cahill
Charles B. Campbell
Arthur C. Christie
Henry J. Crosson
Russell J. Fields
Theodore C. C. Fong
Russell K. Hollingsworth
Frank A. Hornaday
Oscar B. Hunter
Howard F. Kane
Elizabeth A. Kittredge
Henry C. Macatee
William B. Marbury
F. X. McGovern
W. Cabell Moore
Margaret M. Nicholson
Leo B. Norris
Herbert P. Ramsey
John A. Reed
Henry R. Schreiber
Joseph P. Shearer
Joseph S. Wall

All appointments were confirmed by unanimous vote of the Society.

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Factors in Longevity

Physicians having only a nodding acquaintance with statistics will find "The Inheritance of Longevity—A Study Based upon Life Insurance Records," by Louis I. Dublin and Herbert H. Marks, fascinating reading.

Aside from the statistical analysis showing "a positive relationship between the longevity of parents and offspring," there are enlightening observations, some of which are of particular interest to the medical profession.

The following are selected excerpts from the conclusions of the authors:

"From a more general point of view, we pose the question whether such association as exists between parental longevity and that of offspring is, in the main, the result of inheritance rather than of environmental conditions. Our data afford little or no evidence on this matter, nor do the basic records lend themselves particularly to such analysis. There can be no question, however, of the distinctly bad effects of orphanhood on the health and mortality of young people, and these effects may be quite lasting. The premature death of either parent often results in the breaking up of the home, with its consequent lack of care of offspring. This usually applies whether it is the father or mother who dies. The situation is even worse when children are left complete orphans at a relatively early age. The children in all broken families where either or both parents have died, are, on the whole, much more poorly housed, badly fed and poorly clothed than other children, and more of them are compelled to go to work at an early age; consequently more engage in unskilled labor and other poorly paid work than the children in normal families. All of these conditions were worse at the beginning of the century than they are today.

"On the other hand, there may be strong beneficial influences from survivorship of parents on the longevity of offspring even at comparatively late ages of the offspring, and these influences may have nothing whatever to do with heredity. For example, parents in these cases may help their offspring financially and in other ways, and the good mental and spiritual environment of a family, particularly if it is closely linked together, in which the parents survive to late ages is real and not without effect on the mental and physical health of their children.

"Another general aspect of this subject to which we may draw attention is the relatively limited gain in longevity likely to accrue from control of hereditary factors as compared with the large additions achievable by control of environment. Even if all the advantage in the groups with the lowest mortality in our study were the effect of heredity alone, the maximum difference in expectation of life at age 20 probably does not exceed three years. This figure is relatively much smaller than the gain of five years which has been recorded among men in the general population at age 20 in the short period covered by the present study. This clearly indicates that recent gains through improvement in environment greatly exceed those which have accrued from favorable heredity. And the possibilities of gain in life expectation through changes in environment have by no means been exhausted. Intensive application of our present medical and sanitary knowledge would result in such a large decline in death rates that six years more would be added to the current expectation of life at age 20. These facts have a distinct bearing on the controversy that has gone on for many years between the leaders of the eugenics movement, on the one hand, who stress the importance of heredity and, on the other hand, physicians, social workers and other groups who have emphasized the social gains inherent in the improvement of the environment. Certainly, on the basis of conditions in the world today, the environmentalists have distinctly the better of the argument in so far as this relates to the question of longevity."

President's Page

IN RETROSPECT

It is natural that the President of our Society should, upon his retirement, review the accomplishments during his term of office. Throughout the twelve-month period just passed, there has been a gradual shifting from ordinary pursuits to those of a wartime nature. Despite this fact, the Society has made gains in which I believe its members may take satisfaction.

MEDICAL BUREAU, which at the beginning of the year was still in its experimental stage, has emerged as a very valuable agency of the Society. Not only has its growth been rapid, but it has established itself in the confidence of the great number of physicians who use it. Equally important has been its reception by the public, which has used it to a far greater extent than was expected. As time goes on, the BUREAU will serve a larger proportion of the population and become, as it should, a center of information for the entire Metropolitan Area.

In my message to the Society at the Annual Business Meeting, I mentioned the scientific programs which were so carefully and ably arranged in the past year. For the first time, the Program Committee sponsored House Officers' Night, the purpose of which was to stimulate scientific research among young physicians. I sincerely hope that this innovation will become a permanent part of the Society's program.

The 13th ANNUAL SCIENTIFIC ASSEMBLY stands as evidence of the progressiveness of the medical profession in this community. It did much to bring about a closer relationship with the Army, Navy and Public Health Service. All of these Government departments took an active part in the meeting.

It would be an inexcusable oversight if I failed to mention the good work of the Woman's Auxiliary which this year has been very active. Particular mention should be made of the increase in its membership, which was the largest in recent years. The Society has a valuable aid in the Auxiliary in these times.

These are perhaps the outstanding achievements of the organization year. However, there are others with which I hope members of the Society will familiarize themselves. They are described in the Report of Activities for 1941–1942, a copy of which can readily be obtained by calling the Society's office.

In this closing message, I wish to express my gratitude to all members of the Society. Without exception they have been coöperative and have shown me every consideration. It has been a pleasure to serve the Society as its President and I hope I may live many years to do my part as a member of the Society.

Henry R. Schreiber

War Section

It is apparent that the procedure followed by the Procurement and Assignment Service as it relates to the questionnaires returned by physicians is not fully understood by many Society members. An explanation may therefore prove helpful and clear up any misunderstandings that exist.

First of all, physicians received their questionnaires from the National Roster of Scientific and Specialized Personnel, which is responsible for tabulating the returns and making the data obtained therefrom available to the Procurement and Assignment Service. For example, when doctors are needed by the Army, names of physicians who have signified their desire to enter this branch of the military service are taken from the records by the Procurement and Assignment Service and transmitted on special forms to State Chairmen, who note on the individual forms whether or not the practitioners named thereon are available or essential to the community. Where a physician is considered essential by a State Chairman and the Procurement and Assignment Service, this fact is noted on the record. On the contrary, if it is decided that he is available, the Procurement and Assignment Service notifies the physician that he should apply for a commission.

The procedure followed in the District of Columbia differs from that in the states in that the State Chairman has appointed an advisory committee which accepts joint responsibility for determining the availability of physicians for military service.

The recent registration of physicians provided the District Procurement and Assignment Committee with data which will make it possible for it to act more intelligently. Although the information requested duplicated in part that supplied on the questionnaires from the National Roster, this was unavoidable because the data compiled from the questionnaires returned from the District will not be available to the local committee for several weeks at least. In the meantime, the Committee would have to proceed without a sound basis for its decisions.

In an effort to speed up applications for commissions, a recruiting team consisting of an army medical and a line officer has been assigned to each state. These officers have been empowered to examine physicians and commission them up to the rank of captain.

Mention should be made of the fact that final jurisdiction over physicians of draft age resides with local draft boards. For example, if a physician is 36 years of age and is called by his board, the Procurement and Assignment Service acts in an advisory capacity only. Its relation to the draft board is clearly stated in a memorandum to all state directors (I-363) issued on February 28, 1942 by Brig. Gen. Lewis B. Hershey, Director of the Selective Service System, and amended on April 28, relating to occupational deferment of all medical doctors, dentists, and doctors of veterinary medicine, which reads as follows:

"1. Information previously distributed by this Headquarters clearly indicates an overall shortage of medical doctors, dentists, and doctors of veterinary medicine in the nation. Since war was declared, the shortage of these professional men has become acute. It is now manifest that every qualified doctor, dentist, and veterinarian must serve where he can render the greatest professional service to the nation.

"2. In order to accomplish this purpose, the President, by executive order, has formed the Procurement and Assignment Service. This service was formed primarily for the purpose of gathering and making available information with respect to the supply of qualified practitioners in the fields of medicine, dentistry, and veterinary medicine, with a view of securing the most effective allocation of medical manpower as indicated by the requirements of the armed forces, civilian needs, and industrial medicine.

"3. To work with the headquarters of the Procurement and Assignment Service there has been appointed for each State and the District of Columbia a State chairman for medical doctors, a State chairman for dentists, and a State chairman for doctors of veterinary medicine. These State chairmen will secure information concerning their respective professions and will give advice regarding the allocation of medical manpower.

"4. When considering the classification of any registrant who is a qualified medical doctor, dentist, or doctor of veterinary medicine, the Director of Selective Service desires that local boards, through the State Director, shall consult with the respective State Chairman of the Procurement and Assignment Service.

"5. In considering the classification of a registrant who is a qualified medical doctor, dentist, or doctor of veterinary medicine, the local board may, if it finds such registrant should not be deferred for reasons other than dependency, take into consideration the pay and allowances which such registrant would receive in the event he is commissioned in the armed forces. In practically all instances the pay and allowances of such registrant, if he were commissioned as an officer, would be sufficient to eliminate the question of dependency."

Physicians of draft age are advised to seek commissions at the earliest possible moment so that there will be no complications in the event that they are called to duty. If they fail to do so, local boards may induct them into the Army as privates. As stated above, dependency is not a factor because physicians are entitled to commissions and as medical officers would have sufficient income to sustain their families.

Should other questions arise in the minds of local physicians, they should get in touch with the State Chairman of the Procurement and Assignment Service, Dr. F. X. McGovern.

1942 ANNUAL BUSINESS MEETING

Although the small attendance at the Annual Business Meeting of the Medical Society of the District of Columbia held on May 6 was disappointing, it was not unexpected. Many physicians in the District are overworked and either too busy or too tired to attend meetings as they did before the war. Undoubtedly a contributing factor in so far as the Annual Business Meeting was concerned was the change in the method of electing officers. Ballots had been sent to all members of the Society previous to the meeting and voting was done in person at the Society's building from noon until 8:00 p.m. of that day. Three hundred and sixteen members voted as compared to 336 in 1941. The fact that it was not necessary for those voting to come to the meeting undoubtedly had an adverse effect on the attendance.

Dr. Henry R. Schreiber, President of the Society, opened the meeting with a brief statement in which he expressed his gratitude to all who had rendered valuable assistance to the Society in the past year, mentioning the chairmen and members of committees and sections, the general membership, the Woman's Auxiliary, Dr. Daniel L. Borden, his predecessor, Dr. A. Magruder MacDonald, his successor, and the Secretary.

Annual Report of the Chairman of the Executive Board

As a copy of the report of the Executive Board's activities was provided members present, the Chairman stated that he would confine himself to a few observations which he believed would be of interest.

He reviewed his experience as a member of the old Executive Committee and the present Executive Board, of which he has been Chairman for the past four years. He emphasized the fact that the reorganized Board is not only more efficient but because of its limited membership, it is possible to explore matters under consideration more thoroughly and deal with them more promptly. There was no doubt in his mind, he said, that the Society in making this change acted wisely. He paid tribute to members of the Board, particularly those who are no longer serving, Drs. Don Johnson, John Hugh Lyons and Thomas E. Neill.

Warning of impending changes in medical practice the Chairman said:

"There is one matter to which your Chairman has given considerable thought and that is what the future holds for the medical profession. It seems to him that failure to anticipate changes in medical practice following the war is unrealistic. However, there are physicians, probably a considerable number, who believe that somehow things will return to what they were previous to this crisis. Your Chairman is not one of these and he believes that it is not too early for the profession to consider what the probable changes will be.

"It is his belief that in the reconstruction period greater numbers of the population will demand good medical care and no one would deny that all of our people are entitled to the best medical science has to offer. If this be true and medicine as we know it is to survive, professional guidance must be given to new methods of providing medical care so that the standards of medical practice will not be lowered.

"To disabuse your mind of the impression that your Chairman would welcome regimentation of the profession, he wishes to make it clear that he does not favor any system which would interfere with the personal relationship of physician and patient What he pleads for in his final report to you is that the profession be forward looking and that it act wisely and not too late."

The report closed with reference to the splendid service given by examining physicians who had served on Selective Service boards.

REPORT OF THE SECRETARY

The Secretary reported that the Society's membership was the largest in its history. The following figures (as of May 1), 1942 show the increase over a period of five years:

	1938	1939	1940	1941	1942
Active	798	820	848	843	856
Life	52	55	51	60	60
Associate	149	164	190	208	211
Honorary	7	7	7	7	7
Total	997	1,046	1,096	1,118	1,134

On May 1, 1942, 697 Active Members and 180 Associate Members had paid their 1942 dues.

The Secretary participated in 167 meetings and conferences during 1941. In addition, he attended numerous functions sponsored by medical and other organizations and held conferences with the press, legal counsel, public officials, and lay officials, of which there was no record.

Attention was called to the timeliness of the subjects and the known ability of the speakers who were presented on the scientific program during the past organization year. The Secretary had suggested to the Executive Board that because present conditions had adversely affected attendance at many meetings, the Society experiment with luncheon and supper meetings in the coming year.

Assistance had been given by the Secretary to the Committee on Postgraduate Education which was sponsoring a POSTGRADUATE COURSE IN THE MODERN TREATMENT OF BURNS AND THE PREVENTION AND TREATMENT OF CHEMICAL CASUALTIES during the month of May. As in previous years, he had also addressed the senior students of Georgetown University School of Medicine on "Physicians' Records."

Much of the Secretary's time had been devoted to the 13th ANNUAL SCIENTIFIC ASSEMBLY. He served as secretary of the Committee on Arrangements as well as its subcommittees. The ASSEMBLY was undoubtedly the most successful meeting ever sponsored by the Society. Attendance reached a new high, 1,838 registering.

Duties of the Secretary relating to the war effort are increasing rapidly. They require that he devote a large part of his time to this phase of the Society's activities. He is at present serving as a member of the Medical Advisory Council to National Headquarters of Selective Service, Secretary of the Society's Committee on Military Affairs, in a similar capacity to the local Committee on Procurement and Assignment, and as a member of the Medical Advisory Committee and Special Assistant to the Chief of Emergency Medical Service for Civilian Defense in the District of Columbia. In addition, many matters relating to the war must receive his attention in his capacity as Secretary of the Society.

Despite the serious problems incident to the war with which Congress has had to deal, a number of bills relating to medicine have been introduced. The Secretary provided members of the Society's Committee on Public Policy with copies of these bills as well as legislative bulletins issued by the American Medical Association. District legislation received prompt attention. Appearances were made before Congressional committees by representatives of the Committee, on which occasions the Secretary was present.

It was reported that MEDICAL BUREAU had more than fulfilled expectations during the past year. Not only were many more physicians subscribing to the BUREAU, but its use by the public seeking reliable medical information had increased tremendously. On December 1, 1940 the BUREAU began operation with 115 subscribers, 95 to the Alternate Listing Service, 16 to the Telephone Secretarial Service, and four tie lines to hospitals. There are now 182 subscribers, 129 to Alternate Listing Service, 47 to the Telephone Secretarial Service, and six tie lines to hospitals. An additional secretarial board is being built by the telephone company which will be installed before many weeks. At present all secretarial lines are taken.

Increase in the number of physicians subscribing to GROUP HOSPITALIZATION, INC. was also announced. On September 1, 1939, when the Society was first accepted as a participating group, there were 251 physicians subscribing. This had increased to 370 on March 1, 1942.

As Managing Editor of the MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA, the Secretary writes nonscientific material for the Society's publication. He is also in charge of the advertising. Satisfactory progress was made by the ANNALS in the past year. Financially it has been self-sustaining.

Emphasis was placed upon the importance of the lay educational program which had been retarded by the war, too many other demands being made upon physicians who previously addressed lay audiences for the Speakers' Bureau. The radio program, however, had been outstanding. The Society's Committee on Radio Education had sponsored a nationwide network broadcast which was heard over the Mutual Broadcasting System. These broadcasts were of the forum type and were known as "National Defense Health Clinics."

News releases had been prepared by the Secretary for the Committee on Public Relations and on several occasions conferences had been held with the press.

The Secretary expressed his gratitude to officers of the Society, members and the office personnel.

DR. McGOVERN RECIPIENT OF AWARD

On President's Night last year the first Certificate of Award for Meritorious Service to the Medical Society of the District of Columbia was presented to Dr. Edward Young Davidson. Recipient of this year's Certificate was Dr. F. X. McGovern, retiring Chairman of the Executive Board, whose loyal and outstanding service to the Society made him the unanimous choice of his fellow members on the Board for the honor. Dr. McGovern has been an officer of the Society for the past seven years.

ELECTION OF OFFICERS

Except for the office of President-elect, nominees were unopposed. Drs. John A. Reed and Fred R. Sanderson were candidates for President-elect. As a result of the balloting the following officers were elected for the year 1942–1943:

President-elect	Fred R. Sanderson
First Vice President	Thomas S. Lee
Second Vice President	Alma Jane Speer
Member of Executive Board	Henry R. Schreiber
Member of Board of Censors	R. Lomax Wells

Dr. A. Magruder MacDonald, who was elected President-elect in 1941, will take office as President of the Society on July 1, 1942.

NEWS AND PERSONALS

The International College of Surgeons will hold its National Assembly this year in Denver, Colo., July 15–18, 1942. Headquarters and main assembly will be at the Shirley-Savoy Hotel.

The Section on Ophthalmology and Otolaryngology closed its meetings this year with a dinner at the Cosmos Club, May 22. Drs. Arthur Zinkhan, P. S. Constantinople and David Davis participated in the scientific program.

At this meeting Dr. Earle G. Breeding proposed a resolution, which was accepted, to the effect that 50 per cent of all fees collected by members of the Section from patients of a member in the military services shall be remitted to such member until he returns to civil practice; on his return from the service to civil practice, all patients shall be returned to him. The Section also voted to waive all dues and assessments of those who are ordered to active duty and to consider such members in good standing for the duration of the military service and for a period of one year thereafter.

The following officers were elected for the coming year:

Dr. P. S. Constantinople, *President;* Dr. Gilbert H. Mankin, *Vice President;* Dr. T. Frasier Williams, *Secretary;* Dr. John H. Trinder, *Treasurer.*

The Washington Medical and Surgical Society held its 45th annual banquet at the Columbia Country Club, May 20. The members were addressed by John Metcalfe, former investigator for the Dies Committee and reporter for the *Chicago Daily Times*, who spoke on "Grave Diggers of Democracy."

The **Frank E. Gibson Award** for meritorious contribution to medical science was awarded this year to Dr. Richard W. Wilkinson, who was presented a certificate and purse of $25 by Dr. Joseph J. Greenlaw for his "original and outstanding paper on ophthalmology." A fellowship certificate was presented to Dr. William A. Jack, who has been a member of the Society for 35 years.

The Hippocrates-Galen Society met for its annual banquet at the Columbia Country Club, May 12. Cabot Coville of the State Department, political adviser to High Commissioner Sayre in the Philippines, talked about his recent experiences in Manila and Corregidor.

The George Washington University Medical Society held its annual business meeting, May 16. Dr. Howard F. Kane delivered his Presidential Address on the subject, "Obstetrics in War Time." Officers and committee chairmen read reports of activities during the past year. The following officers were elected for 1942–43:

Dr. William M. Ballinger, *President-elect;* Dr. Clyde P. Reeves, *First Vice President;* Dr. Petrena Abbe Shea, *Second Vice President;* Dr. Oscar B. Hunter, *Secretary-Treasurer;* Drs. Howard F. Kane and Herman S. Hoffman, *Counselors* for five- and four-year terms, respectively.

Dr. William Earl Clark assumed office as President for the coming year on June 1.

Members of the Society and the George Washington University General Alumni Association held a luncheon June 10 during the Annual Convention of the American Medical Association at Atlantic City.

The Food and Drug Administration has sent the following notice to manufacturers of digitalis preparations:

"Examinations of a number of samples of each of the various pharmaceutical forms of digitalis indicate that a substantial reduction in potency will result in changing from USP XI to USP XII standards. The exact reduction is not predictable but our data indicate that the reduction will amount to 40 per cent or more in at least one half the cases.

"In a drug in which standardization is as important as with digitalis, a change in potency of this magnitude is of the greatest interest to the physician and patient. It is suggested that during the transition period in which USP XI and USP XII products may both be available, conspicuous notice of the reduction in potency be given on the labels."

Dr. Arthur C. Christie will give the Russell D. Carman Memorial Lecture at the 89th annual meeting of the Minnesota State Medical Association in Duluth, June 30. His subject will be "Diagnosis and Treatment of Bronchiectasis."

Dr. Benjamin Manchester and Dr. Clayton B. Ethridge presented a paper jointly on "The Clinical Value of Multiple Precordial Leads in Electrocardiography" at the Center for Continuation Study, University of Minnesota, during the conference of the American Federation of Clinical Investigation, held in Minneapolis, April 20.

Dr. Miriam F. Dunn, one of the lecturers for the 1942 Summer Session of the Graduate School of Social Work, Catholic University, will conduct courses on "Social Work and Health" and "Psychiatry and Mental Hygiene."

Dr. Ralph G. Beachley of Arlington, Va., has been appointed Assistant Chief Medical Officer and Liaison Officer for the Metropolitan Area to succeed Dr. William B. King, who died recently. Dr. Beachley has been Director of Public Welfare and Health in Arlington County since 1938. He was recently appointed Regional Consultant on Emergency Medical Service for Northern Virginia.

The initial issue of an attractive new medical journal, **"Quarterly Review of Otorhinolaryngology,"** has just been received at the Society's office. **Dr. Chevalier L. Jackson,** Honorary Member of the Medical Society, is Editor-in-Chief. In his Foreword, Dr. Jackson states that articles will be abstracted from all the important journals in this field published in the United States and Canada, as well as a carefully selected list of the leading publications of the Latin American countries. The material published in the *Review* will be arranged under the main headings, Otology, Rhinology, Laryngology, and later also Bronchology and Esophagology.

Dr. E. Spiegel, Philadelphia, and **Dr. N. Scala,** Washington, presented a paper jointly on "The Importance of Nystagmus in Differential Diagnosis" before the American Therapeutic Society at its 43rd annual meeting in Atlantic City, N. J., June 5.

The Civil Service Commission advises that they are seeking the services of two physicians to fill vacancies as Associate Medical Officers for the Penal Institute located at Lorton, Va. The maximum age limit is 55 and the salary is $3,200 per annum. Whether the doctors are married or single is immaterial. If single, however, and if they so choose, quarters will be provided at the Institution. The cost of these quarters would be $60 per person per year and would include laundry. One or more meals per day at the rate of $80 per meal per year per person will be furnished if so desired.

Those interested may communicate with either Mr. R. L. Huff at the Institution or Mr. E. A. Green at the District of Columbia Jail.

JACOB MARKOWITZ, M.D.

(1901–1942)

Dr. Jacob Markowitz, at one time an Associate Member of the Medical Society of the District of Columbia, was reported missing in recent operations in Malaya, according to the *Globe and Mail* of Toronto, dated April 7, 1942. He is perhaps the first physician casualty from Washington in World War II.

Dr. Markowitz was born in Roumania, September 17, 1901. He received his degree in medicine from the University of Toronto in 1923, and a Ph.D. degree in 1926. He also studied at the University of Minnesota, where he obtained his Master of Science degree in experimental surgery. At various times he had held staff appointments at the University of Toronto, Glasgow University and Mayo Foundation, and was known as an outstanding authority on experimental surgery. About two years ago he went to England, where he was granted a commission in the Royal Army Medical Corps. He was posted to a base hospital, which was sent to Malaya late last year.

Dr. Markowitz became an Associate Member of the Medical Society of the District of Columbia in January 1931, when he was Professor of Physiology at Georgetown University, and continued his membership until May 1933. He had published 55 scientific papers on metabolism and experimental surgery, as well as several textbooks on surgery.

His wife, Dr. Cecile Markowitz, with whom he had practiced medicine since their marriage, preceded him in death in 1940. His mother, Mrs. J. Markowitz of Toronto, survives him.

(*Continued from page 210*)

based. All books, and all men, remain open to challenge, and there can be no plea of privilege." This is a call to battle as clear as it is compelling.

My sincere hope is that this contest and similar ones in years to come will inspire you to undertake some problem in clinical research, in order that you, too, may become challengers of authority and fighters for Truth.

(*Continued from page 213*)

N.B. This work was carried out in the surgical service of Gallinger Municipal Hospital under the direction of Dr. J. Ross Veal, whose assistance is gratefully acknowledged.

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(*Continued from page 229*)

and well supervised procedure for the preparation and care of all the equipment and solutions used in conjunction with the preparation, storage, and administration of plasma.

N.B. Indebtedness is acknowledged to Dr. J. Ross Veal, Chief Resident Surgeon of Gallinger Municipal Hospital, for his unfailing support and advice in the conduct of this study.

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The May issue of the MEDICAL ANNALS was lost in transit after it had been mailed from the publication office. A number of days elapsed before it was located, which explains why that issue was received by Society members later than usual.

MEDICAL ANNALS
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BERIBERI HEART DISEASE AND PULMONARY EMBOLISM

Report of Three Cases

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BERIBERI heart disease has been thoroughly discussed in the literature of recent years, and beriberi is now accepted as an important etiologic factor in heart failure. We do not want simply to add to the list of reported cases of this disease, even though such reports serve to emphasize the need for awareness of a disease which in many cases is curable. Rather, it is our desire to call attention to some aspects of beriberi heart disease which have not been noted often.

There seems to be no doubt that beriberi heart disease is due to deficiency of the vitamin B complex. There is, however, some reason to question the belief that the disease is due specifically to a lack of thiamin hydrochloride.[1] As might be expected, clinical examples are most often found in patients whose diets are grossly deficient. Thus, beriberi heart disease often is associated with chronic alcoholism, food fadism, poverty, and other conditions in which there is a decreased intake of the vitamin B complex. Deficiency states also may result from failure of absorption, improper utilization, and increased vitamin need.

The symptoms and signs of beriberi heart disease show no important variation from those of heart failure due to other causes. The diagnosis, therefore, depends mainly upon securing evidence of a deficient diet, ruling out other etiologic types of heart disease, and in some cases the therapeutic response to administration of vitamin B. Some of the manifestations which are reported often to be associated with beriberi heart disease include a tendency for the pulse pressure to be increased, edema out of proportion to other signs of heart failure, attacks of syncope due to hyperactivity of the carotid sinus reflex, a tendency to develop sudden circulatory collapse, the finding of relatively normal circulation time measurements in the presence of an elevated venous pressure, and evanescent or persistent electrocardiographic changes indicative of myocardial damage. Very often there are obvious signs of one or more additional vitamin deficiency states.

The morphologic changes in the heart in cases of beriberi heart disease are nonspecific and inconstant. The heart is usually dilated and may or may not be hypertrophied, depending probably on the duration of the symptoms. Microscopically, the myocardial fibers and conduction bundle commonly show hydropic degeneration. When this is present there is usually also intercellular edema and collagen. In only one small group of cases was the finding of mural thrombi reported.[2] In the experience of other authors,[3,4,5,6,7] apparently this is an unusual manifestation. Embolism was frequent in those cases in which mural thrombi were present.

In the treatment of beriberi heart disease all of the measures usually employed for the relief of congestive heart failure should be used, but it is preferable to withhold digitalis long enough to observe the effect of administration of thiamin hydrochloride as a therapeutic test. However, in some cases response to the therapeutic test is delayed or poor. This result does not rule out the diagnosis of beriberi heart disease, and in such cases digitalis should be used. The dose of thiamin hydrochloride is purely empirical. Probably larger doses than are actually needed have been given. This is an unavoidable necessity in view of the present state of our knowledge. As a rule, from 50 to 100 mg. is given in divided doses daily. Administration should be by subcutaneous injection or by mouth in preference to the intravenous route. Appropriate therapy should be used for associated vitamin deficiency states.

REPORT OF CASES

Case 1.*—The patient was a 37-year-old white man who was first admitted to Gallinger Municipal Hospital on April 18, 1939 with complaints of dyspnea and edema. For about 6 months he had been having occasional attacks of severe dyspnea at night. For several weeks he had been constantly short of breath on exertion, and for several days he had been orthopneic. The man had been a chronic alcoholic for about 15 years, usually drinking a quart of whiskey a day. For about 5 months there had been intermittent edema of the feet and legs, usually following a period of intensified drinking. With the onset of more severe dyspnea, edema had become persistent and slight swelling of the abdomen had developed. Except for rare intervals the patient had eaten very little, and for about 2 months the consumption of food had been even less than usual. During the 2 years preceding hospitalization there had been several attacks of severe diarrhea associated with soreness of the tongue and mouth.

At the time of admission the physical findings were mainly those of severe heart failure. There were orthopnea, moderate cyanosis, and distension of the veins of the neck. There were signs of pulmonary congestion and pleural effusion on both sides. The heart was moderately enlarged to the left, there was a gallop rhythm at the apex, and the rate was 120. There were no murmurs. The blood pressure was 98/68. The liver margin was 6 cm. below the right costal margin. There was evidence of slight ascites, and there was moderate edema of both legs. In addition, the edges of the tongue were red and smooth; the "exposed" portions of the skin were dry, scaly, and pigmented; and the deep tendon reflexes were quite hypoactive.

On the basis of the history it was decided that the etiology of the congestive heart failure was probably beriberi heart disease. Accordingly, Brewer's yeast and thiamin hydrochloride for oral administration were prescribed in adequate amounts. Later, nicotinic acid and ferrous sulfate were added. A high-vitamin diet was ordered, and after the second or third hospital day the patient began to eat well. Digitalis was not given. The symptoms of heart failure abated with remarkable rapidity. On the second day there was practically no edema, cyanosis had disappeared, dyspnea was lessened, and there was no evidence of pleural effusion or ascites. However, the venous pressure on this day was still quite high, being measured as 220 mm. of saline by the direct method, and showing a prompt rise to 290 mm. when the right upper quadrant of the abdomen was compressed. The arm-to-tongue circulation time with the use of 5 c.c. of 20 per cent Neocalglucon was 26 seconds, and the arm-to-lung circulation time with the use of 5 minims of ether was 21 seconds. No part of the patient's improvement could be ascribed to rest in bed, because after the first day he became confused and hallucinated and took to wandering in the hospital corridors at such times that he was not chafing at his restraining sheets. By the sixth day practically all signs of heart failure were gone, but the patient's mental state was such that it was necessary to transfer him to the Psychiatric Division. He remained there for about 3 weeks, gradually recovering from delirium tremens. During this time administration of vitamins was continued, and in addition the patient was given digitalis, probably because his pulse rate was still fast and apparently not because of a reappearance of signs of heart failure. On May 16, 1939, he was returned to the Medical Division where he remained for about a week under observation. There was no residual of any of his complaints. Mental confusion, signs of avitaminosis, and evidences of heart failure were absent. The venous pressure was 80 mm. of saline. The only abnormal finding was moderate cardiac enlargement. Finally, on May 26, 1939, the patient was discharged with the instructions to continue taking thiamin hydrochloride in doses of 10 mg. 3 times a day and digitalis in doses of 1½ grains a day.

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* This case was previously reported in part as a clinicopathologic conference by YATER, W. M., AND WALLACE, J.: Alcoholism and the heart. M. Ann. Dist. of Columbia, 1940, 9, 54.

Laboratory studies during the first period of hospitalization were not especially remarkable. The urine at first showed moderate amounts of albumin, but this cleared away as the congestive heart failure improved. There was mild anemia of the hypochromic microcytic type. The blood Kahn reaction was negative. X-ray examination of the thorax confirmed the moderate cardiac enlargement and showed that the heart did not alter in size during the period of hospitalization. The increase in heart size seemed to be mainly in the left ventricle. An electrocardiogram was not obtained until just before the patient was discharged and was not helpful except to demonstrate changes in the T waves probably due to digitalis intoxication.

After leaving the hospital, the patient promptly resumed the excessive use of alcohol and stopped taking the prescribed drugs. Again he failed to eat, and approximately 2 weeks prior to readmission he noticed that he was again becoming short of breath. The dyspnea grew progressively severe, and for a few days before the second admission on November 13, 1939, he had persistent edema of the ankles as well as extreme pain and tenderness of the feet. At this time the patient appeared well developed and well nourished. His temperature was 98.6°F., the pulse rate 100, the respiratory rate 25, and the blood pressure 120/90. He looked acutely ill and quite dyspneic. There appeared to be slight icterus. The tongue was smooth and shiny. The neck veins were engorged and filled both from above and from below. The apex beat of the heart was palpable 9.5 cm. from the midsternal line in the fifth left intercostal space. The cardiac rhythm was regular, and the sounds were distant. There was a soft apical systolic murmur. Subcrepitant râles were heard at both lung bases. The liver was palpable 7 cm. below the right costal margin. The toes were cold and cyanotic, and the feet were quite tender. Femoral and popliteal pulsations were present, but the posterior tibial and dorsalis pedis pulses could not be felt. There was moderate edema of the feet.

The venous pressure in the right arm was 315 mm. of saline, and on abdominal compression it rose to 375 mm. Oscillometric studies confirmed the absence of pulsations in the feet and showed only slight pulsations at the ankles.

The urine and routine blood examinations were normal. The blood Kahn reaction was 4 plus. The icterus index was 25. A roentgenogram of the chest showed accentuation of the bronchovascular shadows and increased density in the inner zones of both lung fields, suggesting the presence of pulmonary congestion. The heart was moderately enlarged. An electrocardiogram showed inversion of the main ventricular complex in leads 2 and 3 and marked slurring throughout. The ST interval was depressed in lead 1 and elevated in the remaining leads. The T waves were inverted in lead 1.

The patient was treated for congestive failure in the usual way, and in addition was given large doses of thiamin hydrochloride parenterally. His toes became less cyanotic while under a heat cradle, but he did not improve otherwise. He became delirious and developed Cheyne-Stokes respiration. On his sixth day he suddenly became acutely dyspneic and cyanotic. Manifestations of severe vasomotor collapse quickly ensued, and the patient died.

At necropsy the heart weighed 565 grams, and all the chambers were enormously dilated. The valves and coronary vessels were normal. A large mural thrombus, measuring 6 cm. by 2.5 cm. by 2 cm., was firmly attached to the wall of the left ventricle. A small mural thrombus was also found in the apical region of the right ventricle. On microscopic examination hyalinization of the myocardial fibers with loss of cross striations was noted. A few small scars were seen. The lungs were intensely congested and edematous. The entire right upper lobe was the site of a hemorrhagic infarct. The liver weighed 1,012 grams and showed widespread central necrosis of the lobules with vacuolization of many of the peripheral and midzonal cells. The spleen weighed 125 grams and contained an old infarct measuring about 1 cm. in diameter. The kidneys were normal except for an old infarct at the lower pole of the right kidney. One dorsalis pedis artery was dissected out and appeared normal.

Case 2.—R. S., a 41-year-old white man, was a patient at the Gallinger Municipal Hospital on 8 occasions from 1932 to 1940. He was a habitual alcoholic, having consumed a pint of whiskey daily from the age of 20, but at times exceeding this amount for days or weeks, when delirium tremens would ensue. He always maintained that his general health was good, and indeed the only serious illness prior to 1932 had been the result of an injury to the right leg when he was 11. At that time the leg had been amputated. The records of the patient's first 6 periods of hospitalization invariably included a reasonably careful physical examination, and in none of them was there any distinctive evidence of heart disease or of any of the common etiologic factors for heart disease. As late as June, 1939 the heart was described as normal in size and free of murmurs. The blood pressure records ranged from 112/80 to 130/74.

On October 29, 1939 the patient was admitted to the hospital for the seventh time, apparently in his usual state of profound alcoholism. A history could not be obtained until the following day. It was then learned that he had been growing progressively more dyspneic for about 5 weeks. For 2 weeks there had been an annoying cough, and for about 5 days severe paroxysms of dyspnea had prevented rest at night. The patient was unaware of edema of his remaining lower extremity until it was pointed out to him at the hospital. Aside from these facts the history was very much as usual. He had been drinking more than usual and eating practically nothing for at least 5 weeks, had lost strength, and had developed the usual tremors and tremulousness. On physical examination it was readily appreciated that the patient had heart failure. He had orthopnea, signs of pulmonary congestion, enlargement and tenderness of the liver, and moderate edema of the leg. The blood pressure was 75/60. The heart was slightly enlarged and there was a loud systolic murmur, widely transmitted from its point of maximum intensity at the apex. The heart rate was 120, and the rhythm was regular. The initial venous pressure measurement was 165 mm. of saline with prompt significant rise of the venous pressure when the right upper quadrant of the abdomen was compressed. The arm-to-tongue circulation time with the use of 6 c.c. of 10 per cent magnesium sulfate was 22 seconds, and the arm-to-lung circulation time with ether was 6 seconds. There were also signs of mild peripheral neuritis and the usual indications of severe alcoholism.

On this occasion the patient remained in the hospital for almost a month. During the first few days adequate amounts of digitalis were given without notable effect on the symptoms of heart failure. Peroral administration of thiamin hydrochloride, nicotinic acid, and Brewer's yeast was then begun and continued until the patient left the hospital on November 23, 1939. Unfortunately, the notes of his progress are incomplete, but apparently there was a fairly rapid disappearance of all symptoms within from 7 to 10 days. By November 18 there were no signs of illness except that the heart remained slightly enlarged and the systolic murmur persisted. An electrocardiogram, November 1, 1939 showed sinus tachycardia and low amplitude of QRS complexes in leads 1 and 3. In lead 4F the R wave was small, the S wave quite deep, the ST segment elevated, and the T wave inverted.

On April 9, 1940 the patient had his last admission to the hospital. He had been drinking as heavily as ever until about a week before. Apparently at that time he became too ill to continue drinking. He was severely dyspneic, had noticed edema of the foot and leg, and had been coughing almost continuously. Again, the physical examination included abundant signs of heart failure. The cervical veins were distended, the lungs congested, the left pleural cavity partly filled with an effusion, the liver enlarged, and the leg edematous. The heart was moderately enlarged, the sounds were somewhat distant, the rate was 112, and there was a gallop rhythm and an apical systolic murmur. In addition there were indications of pellagra in the skin and mucous membranes and there were the usual tremors and mental confusion.

The routine treatment for heart failure was started, except that no digitalis was used. However, large doses of thiamin hydrochloride and nicotinic acid were given by mouth. Within a few days the patient appeared remarkably improved. There was less dyspnea, fewer signs of pulmonary congestion, and considerable diminution of edema. The laboratory studies were not remarkable except for an elevation of the blood urea nitrogen to 63 mg. per cent at the time of admission. An X-ray film of the chest confirmed the presence of pulmonary congestion and a pleural effusion on the left side. The transverse diameter of the heart measured 14.5 cm., only slightly more than half the transverse diameter of the thorax.

Some time early in the morning of April 14, 1940 the patient became severely dyspneic, weak, and cyanosed. These facts were noted by the nurse who was called to his bed at an undetermined but probably short time after the onset of the attack. She administered caffeine sodiobenzoate intramuscularly and called the attending intern. By the time he arrived, about 10 minutes later, the patient was dead, so that a more accurate appraisal of the mode of death was not obtained. Permission for a necropsy could not be secured.

Case 3.—A. C., a 33-year-old Italian barber, was admitted to Gallinger Municipal Hospital on August 8, 1940, complaining of weakness of the lower extremities. He had been an alcoholic since 16. He had drunk about a half pint of whiskey a day until approximately 3 months prior to admission, when he was advised by a physician, whom he had consulted because of anorexia and nervousness, to refrain from drinking. For a period of a month he heeded this advice and then began drinking again.

For 5 months preceding his entrance to the hospital he had been bothered by shortness of breath on exertion as well as slight edema of the ankles. The edema was persistent and did not disappear after bed rest. During the ensuing months the edema progressed and involved both lower extremities as high as the knees. The patient also developed considerable weakness. Tingling in the soles of the feet and nausea and vomiting were also prominent complaints. All symptoms became progressively more severe, and on the afternoon of admission the patient became irrational and hallucinated. For a year before admission the patient's diet had been quite irregular and inadequate, due to anorexia, nausea and vomiting. Except for an appendectomy 10 years preceding admission and treatment for acute alcoholism, there were no previous illnesses.

On examination the patient was found to be well developed and fairly well nourished. He was lying quietly in bed, breathing 30 times per minute, but apparently without distress. The rectal temperature was 99°F. The face was slightly puffy around the eyelids. The skin was slightly icteric, cool, and moist. The hands and feet felt cold. There was slight icterus of the sclerae. There was a definite odor of acetone to the breath. The veins of the neck were prominent. Except for diminution of the breath sounds at the apex of the right lung and the base of the left lung, the pulmonary fields were clear. The heart was enlarged to left and right, the apex beat being palpable in the fifth intercostal space, 10 cm. from the midsternal line. The heart rate was 112, and the rhythm was regular. There were no murmurs. The blood pressure was 85/65. The radial pulses were absent bilaterally. The abdomen was distended, and a fluid wave and shifting dullness were demonstrable. There was edema of the abdominal wall. The rounded, tender edge of the liver was felt 3 cm. below the right costal margin. There was 3 plus edema of the ankles and over the sacrum.

The laboratory studies at the time of admission showed a mild degree of anemia and slight leukocytosis. Urinalysis showed a trace of albumin and acetone, moderate numbers of white blood cells, and an occasional red blood cell. Bile was present in the urine and stools. The icterus index was 40. The blood Kahn reaction was negative. A roentgenogram of the chest showed evidence of thickening of the pleura at the right apex and left costophrenic angle. The lung fields were clear. The heart was generally dilated, having a transverse diameter of 16.5 cm. as compared to the transverse thoracic diameter of 29 cm. The electrocardiogram demonstrated low voltage, absence of R_4, a deep Q wave in lead 4, and a PR interval of .22 second. The venous pressure was 253 mm. of saline and rose promptly to 283 mm. when the right upper quadrant of the abdomen was compressed for 30 seconds. The arm-to-tongue circulation time with the use of 5 c.c. of 20 per cent Neocalglucon was 71 seconds, and the arm-to-lung circulation time with the use of 5 minims of ether was 21 seconds.

On the basis of the history and physical findings, the working diagnosis was beriberi heart disease and portal cirrhosis with superimposed hepatitis. The patient was placed on a regimen of thiamin hydrochloride, liver extract, and Coramine. All drugs were administered parenterally because of the patient's nausea. Liquids and salt were restricted as usual for the treatment of heart failure, but digitalis was not given. At the end of the first week in the hospital, the patient appeared to be definitely improved. There was no cyanosis, the extremities were warm, the radial pulses could be felt, the blood pressure was 90/70, and he was able to retain some food. He continued to have visual and auditory hallucinations and was quite drowsy and irrational. At this time subcrepitant râles were heard at the left base. It was also observed that as the signs of peripheral vascular collapse subsided, the degree of dyspnea and pulmonary congestion increased. Because vomiting had stopped, it was now possible to give the thiamin hydrochloride by mouth.

Eleven days after admission, the venous pressure was 230 mm. of saline, with a rise to 250 mm. when the abdomen was compressed. The arm-to-lung circulation time was 22 seconds. The temperature had risen to 102°F. There was slight edema of the chest wall, front and back, but the edema of the legs had decreased considerably. The heart appeared smaller in size than on admission, the apex being palpable in the fifth intercostal space just to the left of the midclavicular line. The heart sounds were stronger. There were distant breath sounds and crepitant and subcrepitant râles over the left lower lobe and crepitant râles over the right lower lobe. An X-ray film revealed the same general enlargement of the heart, with no change in its configuration in the upright and supine positions. There was enlargement of the hilar vascular shadows and a large area of pulmonary solidification at the left base. There was an area of increased density at the left apex, suggesting a healed tuberculous lesion. Sputum examination showed an atypical pneumococcus. The leukocyte count was 14,900.

At the beginning of the third week of hospitalization, the patient suddenly experienced severe precordial pain and developed marked dyspnea and cyanosis. The blood pressure was 70/60, and the pulse rate was 120. There was dullness on percussion over the right lower lobe as well as subcrepitant râles over the left lower lobe. Six grains of digifolin was given intravenously and this dose was repeated after 4 hours. One and one-half grains of digifolin was ordered to be administered 3 times a day thereafter. On the following day the patient began to expectorate bright red blood. A protodiastolic gallop rhythm was heard at this time. During the ensuing few days the patient's pulse became weaker, respiration was more labored, and the cyanosis was more marked. The gallop rhythm continued until death on the twenty-third hospital day.

The heart weighed 365 grams, was markedly dilated, and appeared spherical in shape. The myocardium was pale brown and soft. There were mural thrombi in the left ventricle and right auricle. The valves were normal. The coronary arteries were patent. On microscopic examination the muscle fibers were thinner than normal and fragmented. On cross section the muscle fibers appeared separated by intercellular fluid. Some of the fibers showed a single small vacuole in the center. The lungs showed evidence of old healed tuberculosis. The right lower lobe was one large infarct and there were emboli in the pulmonary vessels. In the left lung there was another infarct, and here too there was evidence of emboli. Microscopic examination confirmed the gross examination. Small hemorrhagic cysts were seen in the pancreas. The liver was mottled and very finely granular. Microscopic examination showed chronic passive congestion and central necrosis. The kidneys were of normal size and appearance except for congestion.

DISCUSSION

The cases that have been presented are fairly typical of beriberi heart disease. They possess most of the features usually included in the description of that disease. The patients were young men who drank heavily, ate little, had evidence of associated vitamin deficiency states, and had no other apparent etiologic factor for their heart failure. The symptoms and signs of heart failure were obvious in all. All 3 patients looked well nourished, a not uncommon finding in vitamin B_1 deficiency. The fact that the patients did not recover does not preclude the diagnosis of beriberi heart disease. In the first place, it is not possible to rule out this diagnosis because of a failure of the symptoms to respond to adequate doses of vitamin B. Such a failure probably is less often ascribable to mistaken diagnosis and inadequate treatment than to the presence of irreversible and irreparable myocardial changes. As a matter of fact, 2 of the patients did recover from their initial episodes of heart failure and remained well until they resumed drinking alcohol and abstaining from food. Furthermore, the third patient, who succumbed to his first attack of heart failure, had shown considerable improvement when he developed fatal pulmonary embolism to the right lung. His failure to improve more rapidly probably was due to the presence of a large infarct in the left lung.

The question of pulmonary embolism in these patients is of some interest. In cases 1 and 3, this complication, arising apparently from a mural thrombus in the right side of the heart, was the immediate cause of death. In case 2, a postmortem examination was not made, but the description of the mode of dying suggests pulmonary embolism more strongly than the idiopathic vasomotor collapse to which patients with beriberi are susceptible. With one exception we have found the literature bare of reference to the existence of mural thrombi and embolic phenomena in beriberi heart disease. The exception is a report by Dock[2] of a series of 5 cases of beriberi heart disease in all of which mural thrombi were found and in 4 of which there was embolism. Dock called attention to the similarity of the clinical and postmortem findings of his cases to those of a group of cases previously described by Levy and his co-workers[8, 9] as idiopathic cardiac hypertrophy. In Levy's cases mural thrombi were a prominent feature. In his analysis of the problem, Dock suggested that some of the cases of idiopathic cardiac hypertrophy may have represented beriberi heart disease. It is rather surprising that mural thrombosis has not been found in other cases of beriberi heart disease. It is a nonspecific type of lesion that may be encountered in any case of heart failure, since its pathogenesis is dependent in part on cardiac dilatation and slowing of the circulation.

In case 1 the early gangrene of the toes may have been an embolic manifestation, but it seems more likely that it was due to severe heart failure. Fishberg[10] describes symmetrical peripheral gangrene in cases of heart failure and attributes the change to peripheral vasoconstriction resulting from extreme diminution in cardiac output.

The circulation time measurements in all 3 cases deserve some comment. It has been reported[3, 4, 5] that the circulation time often is within normal limits although the venous pressure is higher than normal in cases of beriberi heart disease. This finding is by no means a constant feature of the disease, however, and deserves depreciation. In cases 1 and 2 in this report, the arm-to-tongue circulation time measurements were moderately prolonged, and in case 3 the prolongation was severe. In beriberi heart disease with heart failure as in other types of heart disease, the circulation time depends on several variables, including the cardiac output, the state of the arteriolar bed, and the venous pressure. Probably when the cardiac output is fairly well sustained and the arterioles are wide open, the circulation time will be relatively normal although the venous pressure is high. These conditions may occur more frequently in beriberi heart disease and hyperthyroid heart disease than in other types. but we have observed them often enough in other etiologic types to recognize that they are not diagnostic for any one type. Furthermore, when the variables are differently arranged in beriberi heart disease the circulation time will be greatly and constantly prolonged.

Summary and Conclusions

Reports of 3 cases of beriberi heart disease are given. In the 2 cases in which postmortem examinations were made the immediate cause of death was pulmonary embolism arising from mural thrombi in the right side of the heart. In the other case also, the mode of death clinically suggested pulmonary embolism. This experience suggests that embolism may be a more important feature in beriberi heart disease than is generally appreciated. Attention is directed to the fact that in some cases of beriberi heart disease, as in other etiologic types, the circulation time may be greatly prolonged.

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THE BARBITURATES AND SOME OF THEIR SIDE-EFFECTS

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THE quest for a somnifacient or sleep-producing drug, more ideal than morphine, has been actively pursued for more than half a century.

Scores of compounds have been discovered since Liebrich introduced chloral hydrate for this purpose in 1869, but none may be considered ideal since the effects they produce do not serve as a complete substitute for natural sleep. Somnifacients fail particularly in that they produce side actions, among which are undesirable acute effects on the autonomic functions, respiration, heart and circulation, kidneys, liver and gastrointestinal tract, as well as after-effects on the central nervous system and certain organs.

The search for an improved sleep-producing agent resulted in the finding of a ureide, a urea derivative which possesses such properties, and which has led to the development of a class of somnifacients that is perhaps the most important type thus far discovered.

Urea is not in itself a true somnifacient, but it is capable of readily forming chemical combinations with other comparatively simple substances, which yield, in turn, compounds that are relatively active as central nervous system depressants. When urea is combined with malonic acid, it forms a condensation product called barbituric acid.

The first barbituric acid derivative, chemically known as diethyl barbituric acid, was introduced into therapeutics in 1903 by Emil Fischer and von Mering[1] under the name of veronal, now officially named barbital.

Derivatives of barbituric acid are easily prepared on account of the great reactivity of the two hydrogen atoms in its methylene group, and as a consequence practically every large manufacturer of pharmaceuticals has originated his own preparation, which differs only slightly from the original one first introduced as veronal.

All of the barbituric acid derivatives have acidic properties and as such are practically insoluble in water. However, they form salts, collectively called barbiturates, like the true organic acids, and when treated with alkalis yield compounds that are readily soluble in water.

The derivatives best known are (a) alkylated (aliphatic) and (b) arylated (aromatic) substitution products, the first type being represented by the first derivative discovered, namely, barbital or diethyl barbituric acid; the second type by another old derivative named luminal or phenyl ethyl barbituric acid, known officially as phenobarbital.

Recently, a new group, known as thio derivatives, has been introduced in which sulfur has been substituted for oxygen on the urea carbon. The best known of the new thio derivatives is pentothal sodium (sodium ethyl [1 methyl butyl] thiobarbiturate).

ABSORPTION, FATE, DISTRIBUTION AND EXCRETION

The absorption of the barbituric acid derivatives varies somewhat with the compound, but in general the barbiturates may be said to be rather readily absorbed from the gastrointestinal tract.

The sodium salt of barbital changes to the free acid in the blood,[2] three times as much being found in the plasma as in the corpuscles. Barbital passes to all of the tissues and body fluids and seems not to be concentrated in any of them to any great extent.

In the usual therapeutic dosages, the barbiturates are for the most part destroyed in the body of mammals, barbital and phenobarbital being the chief ones that consistently appear in the urine.[3]

The destruction appears to occur chiefly in the liver, since the effects are more prolonged and more profound when that organ is damaged.

Pratt[4] compared pentobarbital (nembutal) and barbital after liver poisoning in rabbits and found that the duration of action of the former was prolonged, that of the latter unchanged; from which he concluded that the liver destroys pentobarbital and not barbital, 85 per cent of the barbital being found in the urine.

Richards[5] recently reported, however, that exception also must be made of pentothal sodium, since he found that the liver was not essential to its destruction.

The excretion of the barbiturates occurs almost wholly in the urine; only traces are found in the feces.[6]

Amytal and pentobarbital (nembutal) are readily and quite completely destroyed in the body, unchanged forms appearing in the urine only in small amounts (several per cent) and only after large doses.

Evipal and pentothal are so rapidly and completely destroyed in the body that continuous administration is necessary to secure uninterrupted anesthesia.

The ultimate fate in the body of the altered fraction varies with the compound; it may be conjugated with sulfuric acid, changed to urea or completely oxidized, the shortest acting type being easily oxidized.[6]

PHARMACOLOGIC ACTION

The pharmacologic nature of the barbituric acid derivatives is characterized by their depressant action on the higher parts of the central nervous system. When used in small doses comparable to those used clinically, mild sedation and sleep ensue rather promptly, the depth of the depression closely resembling that caused by alcohol.

Fulton and Keller[7] attributed the excitement occasionally seen in dogs and monkeys after pentobarbital (nembutal) to depression of the cortex prior to depression of the hypothalamic centers.

As a group, they are not markedly analgetic, and are possessed of no special pain-removing properties such as those produced by morphine or even the salicylates. They are useless for insomnia due to pain.

The central site of the action of hypnotic doses of the barbiturates is not definitely established. It probably varies to some extent with the preparation.

The evidence indicates that the brain and brain stem are the chief sites of action when ordinary doses are employed. The cord is not materially involved. They raise the threshold of the cord to sensory stimuli only slightly, so that the ordinary reflex irritability is not greatly affected. In chronic poisoning, reflexes may be unchanged, decreased, or increased.

Hypnotic doses of the barbiturates are slightly depressant to the respiratory and cardiovascular systems, but to no greater degree than in natural sleep.

Following toxic doses the activity of the medulla is greatly depressed, resulting in shallow and slow respirations and a marked decrease in blood pressure.

The heart is not affected by ordinary doses taken orally, but toxic doses which produce respiratory depression and peripheral vasodilation cause heart changes secondarily. The carotid sinus reflexes are depressed or abolished and this may lead to collapse.

Tatum,[3] in a recent review of the literature, states that in man no significant alterations in heart action can be ascribed to the specific activity of either the barbiturates or thiobarbiturates.

The tonus and movements of the gastrointestinal tract are depressed somewhat after hypnotic doses of the barbiturates.

The uterus is not significantly affected by small doses of the barbiturates; large doses (toxic) definitely decrease labor pains.

The liver, which is the chief organ for detoxifying the barbiturates, does not seem to be injured except when the organ is already damaged.

Renal function is not altered significantly except after toxic doses, following which there is a decrease in urine (oliguria or anuria), probably due to the changes in circulation.

Acute Poisoning

Attempts to produce death by means of the barbiturates taken orally are now a rather common practice in the United States. According to Hambourger[8] the number of deaths in this country by such means in 1936 was about 300, in 1937 about 400. These figures are thought to be a fair indication of the trend for the past decade. About 7.3 per cent of the cases die.

The most common symptoms following overdosage are drowsiness, headache and mental confusion, the depression progressing to profound sleep or coma. The depression is occasionally preceded by mild excitement, with indistinct slurring speech, and ataxia resembling that seen in intoxication with alcohol. There is no vomiting.

Respiratory depression is marked, both rate and depth being reduced. Irregularities of the Cheyne-Stokes type may occur.

The capillaries dilate, and the skin becomes moist and cyanotic, the lungs edematous. The blood pressure falls largely from the effects of anoxia on the capillaries, and in the late stage may reach a shock level. The temperature falls when the coma is profound but may rise again, to reach a fever level. Hypostatic pneumonia occurs unless the patient's position is changed at regular intervals.

The heart is not affected early in the poisoning, but later the anoxia and the resulting capillary paralysis which ushers in the stage of shock secondarily affect the heart, following which the pulse becomes weak and rapid. The pupils are generally constricted, but react to light, becoming dilated when marked asphyxia occurs. The muscle tonus is preserved but diminished; the reflexes are usually impaired, but present, except late in the poisoning. The urine becomes scanty or suppressed.

The treatment of acute poisoning should consist of measures to (a) prevent further absorption by washing out the stomach and the giving of a saline such as sodium sulfate to cleanse the intestines; (b) artificial respiration may be necessary at once, following which respiration should be stimulated by means of one or more of the following drugs: caffeine sodiobenzoate (3 grains [0.2 Gm.] intravenously), picrotoxin (3 to 10 mg., intravenously), metrazol (1 c.c. of a 10 per cent solution by vein), strychnine (5 to 10 mg. by vein). The last one also aids in restoring some of the lost muscle tonus and thus favors the return circulation.

Other measures aim to prevent the shock from becoming deeper by the prevention of heat loss, and the administration of oxygen to combat the anoxia.

Renal excretion should be kept at a high level and the blood volume should be maintained by the intravenous administration of 5 per cent glucose or glucose in saline.

Some of Their Side-actions

The side-actions or undesirable actions occurring during the therapeutic use of the barbiturates are relatively infrequent, appearing mainly after their continued use. The infrequency with which undesirable actions occur forces one to regard them more as idiosyncrasies than as side-actions in the usual sense. Clinically, at least, an individual hypersusceptibility seems to be necessary for the production of the delayed effects on the central nervous system.

This hypersusceptibility often appears to be related to a previous somatic disturbance of considerable magnitude.

Unusual reactions may appear after the use of small or therapeutic doses. Among the reactions which more nearly resemble idiosyncrasy than normally occurring side-actions are excitement and delirium.[6] Some individuals may be so hypersensitive that therapeutic doses may cause profound sedation.[9]

Skin reactions are more common after their continued use, but may occur after the administration of a single dose of 1½ grains (0.1 Gm.).[10]

Sensitization to the barbiturates may be acquired. Langenbach[11] in 1934 reported a case of a male adult who had been taking 3 grains of amytal orally daily for several years with no unusual reactions. After discontinuing the drug for about a year and upon resuming the usual dose he developed after 9 hours a skin rash and edema of the lips and eyelids. The rash lasted 3 days, the edema about a week. He could obtain this reaction repeatedly. However, the sensitization did not extend to the other barbiturates.

Numerous instances of synergism have been reported in the laboratory from the combined use of the barbiturates with other agents, among which are certain anesthetic gases, ether, phenacetin, calcium, magnesium, alcohol, morphine,[3] and the sulfonamides.[12]

These instances of synergism may be regarded rather as examples of simple summation of effects than as potentiation. Reports of chronic effects occurring clinically are uncommon.[13]

Neither laboratory nor clinical investigators wholly agree among themselves as to the possibility of producing chronic intoxication with the barbiturates. Among the laboratorians, the work of Seevers and Tatum[14] is outstanding. They gave dogs orally 100 mg. per kilo of sodium barbital almost daily for 3½ years. This dosage compares quite favorably with the dose taken by "addicts." They wished to keep the dose low and thus prevent serious cumulative effects. A slight weight loss was observed initially, but after 2 or 3 weeks the animals accustomed themselves to the daily depression and took food normally. After a period of maintenance of weight the animals again lost weight slowly until death occurred. Two animals in which the poisoning was not so severe gained weight and became quite obese.

In all animals a decrease in the sleeping time was observed, but in no instance did the drug fail to produce depression and sleep.

After about 2 to 6 months, characteristic physical signs appeared, prominent among which were muscle tremors, incoördinate gait, and a type of intention tremor seen when the animals attempted to eat. These signs were best seen 24 hours after the last dose, disappearing when the daily dose was again given. When the animal awoke he was quite normal except for his apathy. If the drug were omitted for 48 hours, the nervous irritability increased, the tremors became more severe, and motor unrest with continuous ataxic movement was present. Convulsions were not infrequent, particularly after a period of abstinence of 2 to 4 days.

In all cases except 1, the dogs reached a period for 3 or 4 days prior to death of apparent intolerance to barbital.

The outstanding feature at autopsy was the presence of considerable light yellow fat in the omentum, mesenteries, perinephritic areas and pericardium, even in those dogs which had suffered the greatest loss of weight. There were also fatty changes in the liver and a hyperemia of the region drained by the portal vein.

The brains of 2 dogs showed evidence of diffuse damage, the ganglion cell changes being indicative of both acute and chronic intoxications, such as swelling with occasional vascular change and shrinkage, pyknosis and incrustation. Proliferative and regressive changes were quite extensive in the leptomeninges, with definite thickening and hyperplasia. There were profound alterations in the glia, particularly the oligodendroglia.

On the basis of these and other studies, together with a survey of the literature, Seevers and Tatum considered barbital as a habit-forming drug, and it seemed logical to them that it could produce permanent cell damage. They regarded it questionable whether an individual once addicted to barbital could ever fully recover.

Mott et al.[15] gave veronal, dial and luminal daily to cats and monkeys, orally in doses of $2\frac{1}{2}$ to 10 grains (0.16 to 0.65 Gm.) for periods of a few days to several weeks. They observed a slight degree of tolerance, and in some animals exhaustion, tremors, and ataxia. Some of their animals were then sacrificed, and in all cases in which the hypnotic drugs were administered for 7 or more days numerous masses of a peculiar mucinoid material were found distributed throughout the central nervous system. This material possessed staining properties similar to amyloid.

After the intensive use of a hypnotic there was present in the nerve cells of the cerebellum, midbrain and spinal cord, chromatolysis, loss of Nissl substance and signs of cell degeneration, the degeneration being accompanied by numbers of phagocytic cells, which appeared to digest the nerve cells. The cats which were not sacrificed recovered without after-effects.

Hoff and Kauders[16] gave sodium barbital to 2 dogs orally for 1 to 2 months, beginning with a daily dosage of about 100 to 200 mg. per kilo, and gradually increasing the daily dose 100 mg. or more each week until death occurred. The animals soon became sulky following their period of sleep. They both developed ataxia. Toward the end of the experiment convulsions (tonicoclonic) appeared, together with an increase in tonus. One animal appeared to have hallucinations.

The brains were examined both macroscopically and microscopically, and upon gross inspection recent leptomeningeal hemorrhages were noted along the larger vessels. Histologically there was found a generalized venous congestion, with severe degenerative changes in the inferior olivary nuclei, destruction of the Nissl bodies, tigrolysis and vacuole formation in the ganglion cells around the inferior olivary nuclei, aqueduct of Sylvius and oculomotor nuclei. The protoplasm was shrunken and atrophic.

The symptoms occurring in man after the long-continued use of the barbiturates are for the most part referable to their effects on the nervous system.

Dannemann[17] describes the nervous syndrome as follows: A victim of chronic poisoning usually shows a plus feeling of tone, at times amounting to euphoria. Some cases show depression with suicidal tendencies. There is confusion with marked difficulty in thinking. Attention, comprehension and judgment are poor. Memory becomes defective with periods of amnesia. There is usually motor restlessness, most marked at night. All cases show some personality change and most of them present some frank psychotic symptoms. Others may develop an acute toxic delirium with marked visual hallucinations.

Speech is thick, slurring or halting. In talking or reading, syllables are frequently omitted. Writing is ataxic. Tremors and nystagmus occur, and tinnitus may be present. Dizziness, muscular weakness and incoördination are fairly constant symptoms. Chronic pains and paresthesias are not uncommon. The reflexes may be normal, increased, or decreased, but are apt to be increased.

Following withdrawal of the drug, the symptoms are exaggerated; there is irritability, motor restlessness, and inability to concentrate.

The first mental symptoms may then develop and convulsions may occur. The pains and paresthesias may become very distressing.

Others have described gastrointestinal disturbances such as lack of appetite and constipation, and also incontinence of the urinary bladder.

Skin eruptions are prone to develop, sometimes being accompanied by fever. Exfoliative dermatitis may occur and end fatally. In a case of subacute poisoning, Taylor and Schram[18] reported skin eruptions (hemorrhagic) accompanied with stomatitis, pharyngitis and conjunctivitis, all of which cleared up in 28 days. There is usually some loss in weight and a mild hypochromic anemia. The urine may contain albumin and hematoporphyrin.

It must be emphasized that all of the above symptoms do not appear in any one case. The variation in the individual may be seen from the description of several cases which have been found in the literature.

Young[19] described a case of a female aged 40 of normal mentality, who suffered from a chronic antral infection for which she had been taking veronal (barbital) for 4 years, for the relief of insomnia. She died from an overdose of a combination of hypnotics. A year before death, the following symptoms appeared in the order in which they are listed: increasing restlessness and insomnia, worry, thick indistinct slurring speech; urticaria, especially of the legs; headache, vertigo, nausea, irritability; indistinct vision and ataxia, the gait being so unsteady that a cane was necessary for walking.

Purves-Stewart[20] reported a case of a female aged 60, whose principal complaint was unsteadiness in the legs. Inquiry disclosed that she had been taking sodium barbital (10 grains [0.65 Gm.] daily) for several years. Examination revealed ataxia, absent ankle jerk, and omission of words in writing. The drug was discontinued and in a couple of weeks all symptoms had disappeared. All cases do not recover so rapidly and completely as those mentioned above.

The cases of Stone[21] are illustrations of such differences. In his first report, one of his cases was that of a woman aged 35, who was admitted to the Cleveland City Hospital because she had acquired a staggering gait and was mentally confused and drowsy.

On admission she was restless, screamed at intervals without cause, had a drowsy facial expression, and would fall into a doze during examination. The speech was halting, definitely scanning, and indistinct. Thought was confused and illogical. The pupils were regular and equal but reacted sluggishly to light and accommodation. There was a pronounced lateral nystagmus, when the eyes were turned to the side. There was a tremor of the facial muscles and of the tongue, intention tremor of the hand, and ataxia of the extremities. The abdominal reflexes were absent, but the deep reflexes could be elicited.

The triad of nystagmus, slow jerky "sing-song" speech, intention tremor and ataxia with absent abdominal reflexes suggested multiple sclerosis, and the patient was demonstrated to students as having an organic neurologic condition with an associated psychosis. After 3 days in the hospital without the drug, her abdominal reflexes had returned, when it was found that she had been taking 15 grains (1 Gm.) of barbital for sleeplessness for several days. Within a week both her physical and mental disturbances had entirely disappeared.

However, in a second report Stone[22] presents evidence indicating that there is a more lasting or even permanent damage to the central nervous system after prolonged use. In this later report he cites the case of an intelligent woman, aged 59, who had developed insomnia for which she had been taking for at least several months $3\frac{1}{2}$ grains (0.23 Gm.) of sodium alurate several times daily. She had been confined to her bed for 6 months and was always very restless until given more sedatives. For 2 months her speech had not been understandable. For at least 10 months she had lost her mental brilliancy and at times would fail to recognize her family. She had convulsive seizures on several occasions. For 6 months there was incontinence of bladder and bowels. Vomiting occurred frequently. The abdominal reflexes were present but depressed. The pupils were small and reacted slowly to light. The rectal temperature was 101°F.

Upon suspending medication she had several convulsive seizures. Swallowing appeared difficult. At times she appeared to have visual and auditory hallucinations. In about a month sphincter control returned and temperature returned to normal. She also began to talk, walk and sleep fairly well. Fifteen months after discharge from the hospital, although physically robust, her speech was somewhat impaired and her mental state childish.

Lambert[23] significantly remarked that "in the mildest intoxications it (veronal) leaves patients ill-natured, sharp-tongued, suspicious, and mean-tempered, giving them a reputation for meanness of disposition which seems so natural that people do not recognize that it is the poisoning from a drug, and the personality of the unfortunate patient is blamed for the perversion." This is perhaps the chief reason why cases of chronic poisoning do not appear in the literature. It is believed that chronic poisoning is more apt to occur from the long-acting than the short-acting barbiturates.[24]

Polatin's[25] experience shows that chronic poisoning in the human is difficult to produce. He used sodium barbital in 5 to 30 grain doses daily for from 1 to 20 months in 80 mentally disturbed patients, and the only toxic symptoms that resulted were drowsiness and slight ataxia, which disappeared in 24 hours after its discontinuance. Hoge[26] reported a case of a female, aged 41, who had been taking 3 to 4 tablets ($1\frac{1}{2}$ grains each) of amytal daily for 7 years and showed only a few subjective symptoms, at times joint pains, moderate tachycardia and a moderate degree of hypochromic anemia. The urine contained a trace of albumin and was alkaline.

The barbiturates as a group apparently are not capable of causing granulocytopenia. However, if they are used in combination with aminopyrine blood dyscrasias will commonly result, being due, however, to the latter compound. In this connection Kracke[27] has shown that unless the barbiturate contains the benzene ring with an attached amino group it is not likely to cause granulocytopenia. Whether the barbiturates are "addict" formers or not depends upon how one defines the term. Robinson[28] has given us a clinical definition which is quite applicable for users of this group. He defines addiction as "the state of being addicted to or needing any single drug or type of drug to produce a physiological and psychological subjective feeling of well-being."

His cases illustrate that laymen will use the barbiturates as they do alcohol. He believes the addictive action which they cause is similar to that of alcohol, a strong psychogenic factor being necessary in both drugs.

I believe we should all agree with Dr. Robinson's conclusion that the promiscuous use of the barbiturates should be forbidden and that physicians should realize fully the potentialities for harm that these drugs possess.

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(*Continued on page 287*)

THE LOCALIZATION AND INTERPRETATION OF CORTICAL DYSFUNCTION BY ELECTROENCEPHALOGRAPHY*†‡

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CONTRARY to popular belief, electroencephalography, in its present state of development, is neither a precise nor wholly objective method for the study of cerebral function. With only a few exceptions, all records must be subjectively interpreted. One has no better guide than experience to determine whether the wave forms comprising any given record are normal or abnormal.

In most, presumably normal, individuals one obtains a fairly reproducible sinusoidal wave pattern whose frequency ranges around 10 waves per second. However, in a large number of "normals" (10 to 20 per cent), malformed, arrhythmic and even slow waves (below 8 per second) are observed.[1] It is obvious, therefore, that the interpreter is often hard pressed, on the basis of the isolated electroencephalogram, to give a categoric diagnosis of normal or abnormal.

For the localization of cortical dysfunction[2, 3, 4] the examiner primarily determines the presence of an abnormality by comparing the wave forms obtained through any one electrode and its combinations with the wave forms obtained from all the other electrodes and their combinations. By this means the recognition of foci of abnormal electric discharges is fairly satisfactory. However, the interpretation of these abnormal wave patterns and their correlation with the underlying pathology are often most difficult. The cause of this difficulty will be developed in the following discussion.

METHOD

An A. M. Grass three-channel electroencephalograph was used in all recordings.

In our standard placement of electrodes, the small solder pellets are placed along symmetrical parasagittal lines over each cerebral hemisphere in the frontal, parietal and occipital regions.[5] The directly connected ear electrodes form a reference for the so-called "monopolar" derivations. More important than the position is the fixation of the electrodes to the scalp. Improperly attached electrodes may give rise to artefacts that are indistinguishable from the wave forms produced by pathologic processes. Approximately 15 minutes is required to properly apply all the electrodes. During this time, one has an opportunity to closely observe the presence and pattern of involuntary movements, as well as the general behavior of the subject tested. This time, too, is utilized to gain the essential basal conditions embodied in the complete confidence and coöperation of the patient. At least 2 records, preferably two or three days apart, are made on each subject.

RESULTS

Figure 1 shows excerpts from the record of a brain tumor suspect. The top 3 lines, from the right cerebral hemisphere, and the bottom 3 lines, from the left hemisphere, are each recorded simultaneously. Clinical signs pointed to a tumor in the left parietal region. The clinical diagnosis is confirmed by the presence of abnormal waves in the left parietal lead. This volley of slow waves occurred for only 30 seconds in a total of approximately 40 minutes of recording. Previous to this unique burst of waves, this lead had shown a wave pattern similar to those in the other 5 lines, which may be roughly described as a random frequency type with isolated waves of long duration. The waves of shortest duration ($\frac{1}{40}$ second) probably are of extracortical origin. Surgical operation revealed a left parietal neoplasm.

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* From Blackburn Laboratory, St. Elizabeths Hospital.

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‡ Read before the Section on Neurology and Psychiatry of the Society, October 16, 1941.

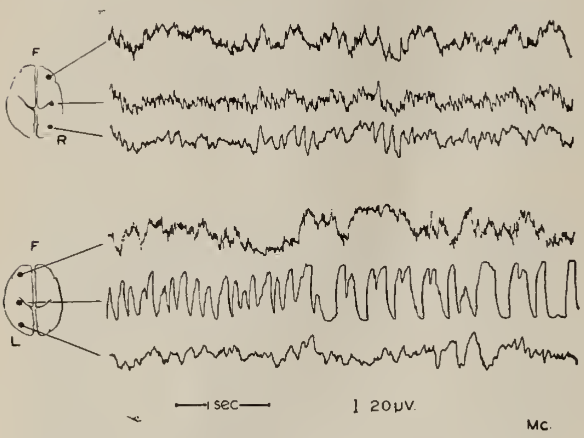

Fig. 1. Brain tumor suspect. Focus of abnormal waves in left parietal region. Simultaneous recordings from right and left hemispheres.

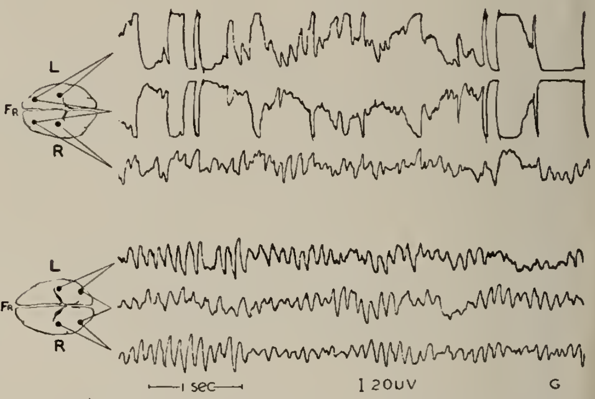

Fig. 2. Atypical epileptic attacks over period of 6 months. Abnormal electric focus in left frontal region. Simultaneous recordings.

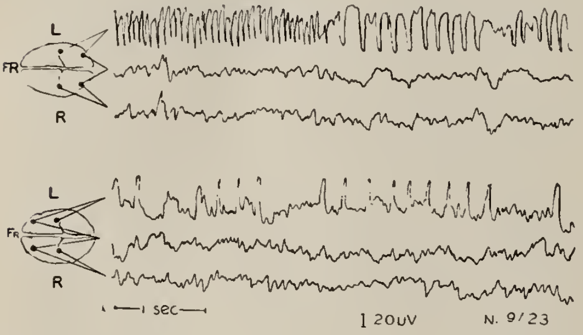

Fig. 3. Epilepsy since boyhood. Cortical dysrhythmia in left parietal region. Simultaneous recordings.

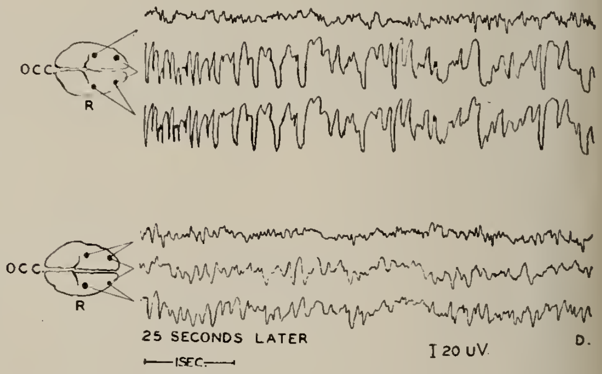

Fig. 4. Dementia praecox. Abnormal waves in right frontal region.

Emphasis should be placed on the fact that, despite the confirmed presence of a superficial parietal lesion, grossly abnormal waves were observed for only 30 seconds; this is even more noteworthy when it is considered that each electrode, in different combinations, was repeatedly used throughout the test.

Figure 2 shows 2 groups of simultaneous tracings from an individual presenting atypical epileptic attacks over a period of 6 months. He gave a history of a short series of similar attacks during childhood.

An abnormal wave pattern is seen in the upper 2 lines. It consists of random spikes and sharp waves. This pattern generally persisted throughout the recording period. It is to be noted that the abnormal waves in these 2 lines are almost perfect mirror-images. These wave sequences are said to be out of phase. This phenomenon, under the imposed conditions of the test, indicates that the electric abnormality arises in the region of the common electrode. Hence, it is clear that the electric abnormality is situated in the left frontal area. One observes that the waves in the remainder of the leads are well formed and show an average frequency of about 9 per second.

Following the electroencephalogram, a pneumoencephalogram showed evidence of a mass in the left frontal region. From the last report, this confirmation was at least partially nullified by negative findings in the ventriculogram.

Figure 3 shows samples of the electroencephalogram taken from an individual who suffered from a convulsive disorder since childhood.

A short burst of high-voltage waves of about 15 per second is seen in the top line. These waves show a peculiarly asymmetrical, almost spike-form which is abruptly superseded by a predominant 6-per-second sequence of waves. The abnormalities persisted in this line for approximately 1 minute. Another abnormality seen in this series of waves is the 4-per-second spike in the 4th line from the top. These 2 abnormal patterns localize the cerebral dysrhythmia in the left parietal region.

Figure 4 shows samples of a record obtained from an individual with the official diagnosis of dementia praecox. An inphase abnormality of the wave forms in the simultaneously recorded second and third lines is recognized. The abnormality consists of a relatively high voltage, asymmetrically formed sequence of waves, with poor frequency regulation. Random spikes also are observed. Within . 25 seconds, as seen in the lower group of simultaneous tracings, the wave pattern strongly tends to resume better regulated frequency and voltage characteristics. Within 3 minutes the distinct differences between the left and right frontal pattern are no longer evident.

CONCLUSIONS

From the data presented, it becomes obvious that:

1. Localized cerebral dysrhythmia may occur in a variety of clinical neuropsychiatric conditions.

2. Gross, superficial cortical lesions may be associated with only transient, abnormal focal electric discharges.

3. Subtle anatomic or functional disturbances, as exemplified in schizophrenia, may also develop abnormal focal cortical activity. This latter fact is not inconsistent when one considers that the electroencephalogram is only an expression of basic neuronal function, and that gross anatomic, microscopic, or even submicroscopic, changes can only be inferred from the electrophysiologic behavior of the active tissues.

4. Interpretation of the electroencephalogram becomes tenable only in the presence of adequate clinical studies carried out at the time of the recording. In its present state of development, it is felt that the electroencephalogram as an isolated test is not conclusive, but that its value is directly proportional to the technical care, the interest of the examiner, and, most important, the quality of the clinical neuropsychiatric observations carried out at the time of the electrographic examination.

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THE DIAGNOSIS OF NEUROCIRCULATORY ASTHENIA

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THE diagnosis of neurocirculatory asthenia (hereinafter called N. C. A.) is important. The condition is a most interesting and perplexing problem and has plagued the medical departments of armies in all wars. The time, effort and money lost because of its improper recognition during and after the last war is well known to us. Recent contact with many recruits and selectees and discussions with examining physicians concerning borderline and potential cases have demonstrated that confusion still exists in regard to diagnostic criteria. In this paper an attempt will be made to clarify the diagnosis of N. C. A.

The term N. C. A. will be used to describe the variable complex of signs and symptoms characterized by easy fatigability, breathlessness, precordial distress, palpitation, tachycardia, tremor and dizziness, all or some of which may be present in one person. The amount of strain necessary to produce these changes varies. The important fact is that it is less than the amount required to produce the same reaction in a person with a normal neurocardiovascular apparatus. The mental tension incident to a physical examination is at times sufficient to induce the syndrome in a susceptible man. It is generally recognized that this complex may be a common accompaniment of infections, convalescence, fatigue, severe exertion and lack of sleep. In this paper, however, the term N. C. A. will be used when none of these causative factors are found to exist at the time of examination.

The cause of N. C. A. has not been established. It is generally known that it is not an organic or functional form of heart disease. Craig and White[1] believe that the condition is not dependent on any known pathologic process of the heart or blood vessels but is often associated with a functional nervous disturbance. McCullagh,[2] Hartsock,[3] and Crile[4] attribute the cause to hyperirritability or dysfunction of the sympathetic nervous system. There is an apparent association with neurasthenia and the anxiety type of neuroses in many cases, yet such cases of N. C. A. in the beginning do not present the typical features of a cardiac neurosis. The thought that these individuals present the picture of N. C. A. because of inactivity, lack of exercise, and poor habits of living is immediately brought to one's attention. Constitution, heredity and individual susceptibility to strain are undoubted factors. Fraser[5] sums the subject up well: "... the syndrome is perhaps best regarded as a functional disorder of the involuntary nervous system, due to a variety of factors which include physical as well as mental strain and fatigue, infections and constitutional weakness. Once the condition has become established, anxieties arise and psychogenic factors are added. . ."

The above discussion is necessary in order to provide a background for diagnosis. The detection of N. C. A is made by history, physical examination and occasional elaborate laboratory tests. As in all diseases one or several findings do not establish a diagnosis, and more than one examination may be required in doubtful cases. Normal people may often show some of the manifestations of N. C. A.

THE HISTORY

Occupation.—The character of one's civilian position is at times an index of his physical condition. A sedentary worker is more likely to be in poor "condition" and prove this by symptoms and signs than one who does manual labor. The inadequate personality type of N. C. A. by background and qualifications shuns physical work and is usually an indoor worker. One may, however, find potential cases of N. C. A. in the ranks of day laborers.

Neurotic Traits.—When nervousness, anxieties, fears or hypochondriacal trends are present they are found in the neurasthenic or inadequate personality type of N. C. A. All neurotics do not present the picture of N. C. A. This neurotic type is found in selectees rather than in volunteers or recruits because these men do not seek out army life and are disqualified on psychologic grounds by examining psychiatrists.

Recent Illness.—It is generally known that influenza, pneumonia, a severe gastroenteritis, or a major surgical operation may leave one in debilitated condition for months. Such convalescents can produce a classical picture of N. C. A. Active tuberculosis, pyelitis, amebiasis and other chronic diseases will also produce the syndrome without the patient's knowledge of the causative diseases. It is not so well understood that a mild infection such as a common cold or pharyngitis or a mild sinusitis following these may cause a mild or moderate pseudo-N. C. A. The potentialities of a cold in this respect last for a week or more in some cases. When these people recover from their mild infections they no longer appear to be cases of N. C. A. unless they were previously latent cases brought to light by an infection.

Physical Condition.—One who becomes dyspneic and fatigued after mild or normal exertion is not in good physical tone and will show signs of N. C. A. This applies even to athletes not in "condition." A sedentary worker exercising regularly is less a candidate than the athlete in poor shape. The recent ability to perform exercise without any strain is a better index of one's condition than any exercise tolerance test based on a pulse response. A history of a strenuous tennis match or a long swim performed without fatigue a day or so previously may dispel the suspicion of N. C. A. in a person with a slightly abnormal pulse response to an exercise test.

Habits.—Overwork can produce the syndrome. The imbibition of alcohol from small to large amounts the night before an examination, an emotional storm, an amorous engagement the previous night, late working hours, and driving a car a long distance before an examination are very important and overlooked causative factors in producing the complex, particularly the symptoms, tachycardia and tremor. Many people will lose these hyperactive reactions after a good night's sleep.

PHYSICAL EXAMINATION

General Status.—The asthenic individuals with clammy extremities, dripping perspiration from their axillae and tremor are easily diagnosed. They are usually the constitutionally weak or neurasthenic type of N. C. A. and will show other signs of their basic mental condition.

Temperature.—An elevated temperature indicates the presence of some infection such as nasopharyngitis or pulmonary tuberculosis. Fever rarely occurs without an organic cause.

Pulse Rate.—A tachycardia above 100 is caused by many factors, nervous and physical. In association with an elevated temperature an infection is further considered. Rest in the recumbent position for 5 to 30 minutes will lower the pulse rates in the normal individual somewhat "stage-struck" by the examination. The analogy between pulse hyperreactors and blood pressure hyperreactors may be true, but the men with tachycardia incident to an examination will respond normally to an exercise tolerance test after rest and reassurance. A standard test is to count the pulse rate before, immediately after and 2 minutes after the candidate steps up on and down from a chair 20 times in 1 minute. The pulse rate should not be increased above 45 beats per minute immediately following the exercise and should return to normal within 2 minutes. This test is a better one than hopping on each foot 20 or 25 times. Hopping does not induce sufficient strain, raising the pulse rate an average of 28 beats per minute compared to the rise of 37 beats per minute after the chair test.[6]

Respiratory Rate.—Evident dyspnea is of the utmost importance and should be noted objectively, particularly after the exercise test. Lewis[7] believes that breathlessness is the chief stigma of N. C. A.

Blood Pressure.—This may or may not be elevated in N. C. A. A labile systolic pressure and a wide pulse pressure are seen usually in association with tachycardia.

Heart.—There are no positive features found when one is examining the heart. A diffuse apex beat and systolic murmurs at the base and apex may be noted and may be associated with tachycardia. Auscultation after exercise and in different positions will help differentiate murmurs, particularly if a history of rheumatic fever is obtained.

Laboratory Aids.—A roentgenogram will reveal pulmonary tuberculosis and aid in diagnosing organic heart disease. A fluoroscopic examination will help diagnose heart disease. A basal metabolic reading can help differentiate hyperthyroidism if the additional clinical signs of weight loss, eye signs and warm extremities do not do so. The blood circulation time is normal in N. C. A.[8] and accelerated in hyperthyroidism. An electrocardiogram is rarely indicated in certain tachycardias and suspicious organic heart disease. While these laboratory aids are useful it is unusual for them to be necessary. They are used chiefly when N. C. A. is associated with an organic condition which may confuse the picture.

It can be readily seen that the proper diagnosis of N. C. A. is important. Experience during the last and present war has demonstrated this fact. A candidate with established N. C. A. is therefore rightly excluded from the army and placed in Class IV-F. However, one showing the signs and symptoms of N. C. A. because of a temporary organic or functional cause should not be permanently disqualified from the army. He should be classified under the heading of the offending cause such as pneumonia, influenza, recent appendectomy disqualifying until cured, Class I-B. Some of these men may be potential cases of N. C. A., a point to be considered in every case, but the majority may be rehabilitated by proper rest, hygiene and graduated exercises for useful army service.

SUMMARY

1. The diagnosis of N. C. A. is becoming increasingly important.

2. The mechanism of N. C. A. is unknown.

3. The diagnosis in most cases can be made by a history and physical examination.

4. Attention must be paid to the many causes of the signs and symptoms of N. C. A., particularly the simple, everyday abnormalities that occur in young men, such as colds, hard work, little sleep, emotion, long automobile trips and alcohol.

5. A clearer concept of the diagnosis and classification of N. C. A. will prevent cases from entering the army and will provide a basis for rehabilitation, cure and subsequent army service of those who present the signs and symptoms of N. C. A. which result from some known temporary cause.

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GAS BACILLUS INFECTION
Report of an Unusual Case

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THIS is a report of an unusual case of gas gangrene which followed compound fractures of both legs. The gas infection spread to involve not only the leg but also the abdominal cavity. It is reported because of the unusual nature of the organism which was definitely proved to be the positive agent.

REPORT OF CASE

Clinical Course.—M. S., an 18-year-old female inmate of a penal institution was admitted to Georgetown University Hospital on February 1, 1941, with a history that on that day at 8:15 a.m., evidently in an effort to escape, she had jumped from a second story window and had landed on both feet. She suffered compound fractures at the junction of the lower and middle thirds of both tibiae. A general anesthetic was administered, both wounds were cleansed with salt and ether, and débridement was thoroughly carried out. The fractures were reduced, the wounds were sutured, and casts were applied. The patient was given combined sera on the operating table. Sulfanilamide by mouth was started 2 hours later. The blood Wassermann was positive and there was a specific vaginal discharge. Twenty-four hours after operation it was noted that the toes on the left foot were slightly swollen, and 30 hours after operation the cast was split. There was an odor about the wound, and definite crepitation was felt. Bluish discoloration was present just above the knee. With very light ether anesthesia the leg was opened wide with longitudinal incisions from the toe to the mid thigh, and sulfanilamide powder was liberally distributed in the incisions. Intravenous combined sera was repeated with a blood transfusion. The patient's general condition, however, did not improve and by the 5th day there was extensive necrosis of the leg and foot. Disarticulation at the knee was carried out under light anesthesia. On the 6th day the patient developed marked jaundice. However, after amputation she seemed better and apparently began to improve. Blood transfusions were given daily. On the 10th day she developed upper left abdominal pain with spasticity and distention of the abdomen and began to be somewhat toxic. A splenic abscess was suspected. On the 17th day a roentgenogram revealed definite evidence of gas infection about the spleen (fig. 1). At that time a trocar was inserted into the gas pocket in the midaxillary line in the 11th interspace, and a rush of foul-smelling gas came forth, so great that it forced the plunger out of the syringe. A tube was inserted at that point for complete deflation of the abscess. There was no drainage from that area, and the tube was removed on the 3rd day,

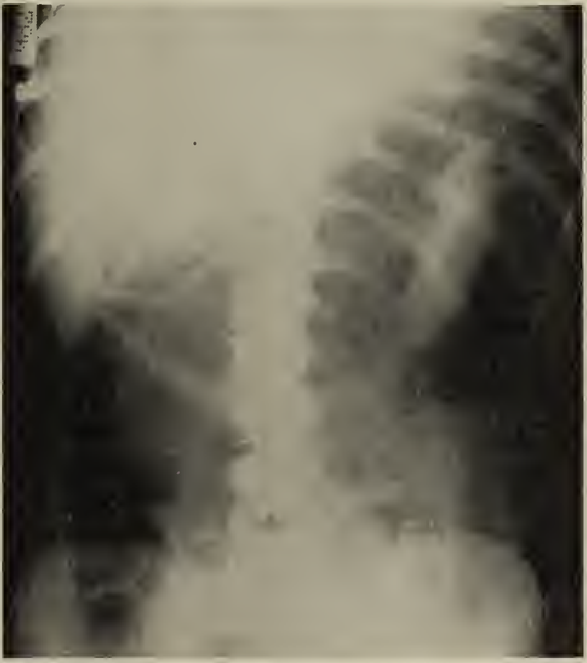

FIG. 1. Accumulation of gas in region of spleen.

after which the wound healed promptly. Roentgenogram made immediately after removal of the tube showed deflation of the gas in the abdomen. Because of the patient's apparent toxemia, sulfanilamide was discontinued on the 13th day. Her blood level had been maintained since the very first day at 10 mg. per 100 c.c. of blood. On admission she had a mild anemia of 3,000,000 erythrocytes and a slight leukocytosis of 13,500. By the 6th day she had a profound anemia of 2,000,000 erythrocytes and a leukocytosis of 40,000. This had slightly improved by the 14th day and was normal at the end of 1 month. The patient had, in all, 10 blood transfusions during the first 14 days of her illness. About 3 weeks later it was possible to perform a supracondylar amputation and obtain a good stump. The fracture of the right leg healed in good position and there was no evidence of infection at any time.

Bacteriologic Data.—The blood cultures taken on February 3, 1941 revealed the presence of a Gram positive and a Gram negative organism. These organisms were cultivated under both aerobic and anaerobic conditions. Later cultivation, however, showed that both organisms were decidedly aerobic rather than anaerobic. It was possible to isolate the Gram negative organism which turned out to be Aerobacter aerogenes and accounted for the large amount of gas formed in the tissues of the left extremity as well as in the abdominal cavity.

A subsequent blood culture taken a few days later showed only the large Gram positive aerobic spore-bearing organism without the Gram negative Aerobacter aerogenes. The blood was independently examined bacteriologically by Drs. Mollari and William A. Randall. The clinical diagnosis stood for gas gangrene with concomitant therapy. It was, however, almost at first sight evident that the large Gram positive aerobic sporebearer was not Clostridium welchii, but rather an "anthracoidal" organism. The Gram positive organism which is the sturdier of the two apparently had in an antagonistic sense outgrown the more sensitive Aerobacter aerogenes. The same Gram positive organism was isolated from fluid taken from the gaping débridements. A smear of this fluid showed the presence of the aforementioned organism in large numbers. Subsequent cultivation of this fluid as well as the blood which was taken intravenously showed definitely an aerobic spore-bearing organism which could be easily cultivated on common laboratory media and which by all evidence belonged in the group known as "anthracoidal" and more definitely in the group with Bacillus cereus, an organism commonly found in the soil.

A subsequent blood culture taken a few days later proved to be sterile, but the organism was still present in the fluid aspirated from the débridements, although in a lesser number than at a previous examination. Another examination of the tissue fluids a few days later proved to be sterile.

Dr. Randall investigated the isolated organism as to its growth and fermentation reactions, which were as follows:

The organism was Gram positive, motile and spore-forming. The spores were ovoid and centrally located. The organism was rather large, probably between 1.5 and 2 microns, and was often seen in long chains. On gelatin the colonies were large and circular with entire edges; on gelatin stab there was crateriform liquefaction; on broth there was turbidity with the formation of a small pellicle; litmus milk was not coagulated; blood serum was not liquefied; there was no indol formation; the organism was aerobic; and as to habitat, it was widely distributed in soil and dust.

Since the above-mentioned reactions corresponded closely to the reactions given in Bergey's "Manual of Determinative Bacteriology" for Bacillus cereus, which organism has been most frequently described in the literature as being associated with pathologic conditions, it was decided to send the two organisms isolated from the blood and the aspirated fluid from the débridements to an authority on this question, namely, Nathan R. Smith, Senior Bacteriologist at the Research Center of the U. S. Department of Agriculture, Bureau of Plant Industry, for final identification of this organism. The report received from Mr. Smith is as follows:

Both cultures, one from a wound and the other from the blood stream, have been identified as Bacillus cereus and are in our collection as nos. 785 and 786 respectively. There is only one very minor difference between these two cultures. No. 785 is actively motile like a regular saprophytic Bacillus cereus. On the other hand, no. 786, from the blood stream, was nonmotile at first, indicating perhaps a closer relationship to the nonmotile anthrax bacillus or to the nonmotile dissociants of Bacillus mycoides. The subculture from a broth culture of this strain became motile.

Mr. Smith calls attention to the fact that he mentions motility only as a possibility to indicate a more pathogenic character. He definitely states, however, that he has no proof that motility is or is not associated with pathogenicity. He observes furthermore that motility is very erratic anyway in the Bacillus cereus group.

Comment

We feel that this is a case of gas infection following a compound fracture with a spread of the organism by direct extension and through

(*Continued on page 287*)

President's Page

CARRYING ON IN THE EMERGENCY

It is customary for the incoming President to set forth in his first message to the Society his views on current medical problems and to discuss plans for the future. Due to the war and the extraordinary situation which prevails during an emergency there are so many uncertain factors that one can only endeavor to anticipate problems which may confront the medical profession.

In regard to the Society's program there can be no certainty about its scope or the projects which can be undertaken. The best we can do is to carry on from day to day, meeting as well as we can the problems as they arise.

While planning is difficult, there are a few things we may look forward to with more or less assurance. For one thing, there will undoubtedly be a shortage of physicians to care for the civilian population. The number engaged in private practice may be reduced to the point where older physicians will be called out of retirement. Internists, and a large percentage of surgeons, as well as those in other specialties, will be asked to supplement the services of the general practitioners. Beyond this it may be necessary to set up medical centers so that care of the population can be facilitated. No matter what adjustments are made, physicians' hours will be longer and conditions under which they practice more difficult. However, I feel sure that regardless of the seriousness of the situation we will meet it in a creditable manner.

The primary duty of physicians on the home front then is to protect the health of the civilian population. This task must be done as well as possible. I am calling on every Society member to coöperate so that we will not fail in our obligations. Upon committees assigned to planning for the emergency will fall a heavy responsibility. I know that they, too, will rise to the occasion.

I have not mentioned the physicians who are now in military services. In regard to them we have an obligation to protect their interests where possible so that when they return to civilian life they will find it less difficult to adjust themselves.

This year, of all years, physicians must be tolerant of each other, making allowances for the tension which exists in wartime. I ask them, too, to overlook the shortcomings of the Society's program. The Society can no longer carry on "business as usual" any more than any other organization, and it does not wish to do so. No other group has a deeper desire to be of service to the country than the medical profession. It has given and will continue to give its best efforts toward an early and conclusive victory.

Editorials

ANDREW MAGRUDER MacDONALD, M.D.

Dr. Andrew Magruder MacDonald, 76th President of the Medical Society of the District of Columbia, assumed the duties of his office on July 1, 1942. A native Washingtonian, he is known personally to nearly every physician in the city. Born on August 26, 1892, the son of Fraser J. and Lawrence May MacDonald, he attended elementary schools in the Nation's Capital, graduating with honors and a scholarship from Central High School. Like his immediate predecessor, he received a scholastic grant which made possible his attendance at Georgetown University School of Medicine, from which he received the degree of Doctor of Medicine in 1915.

Following a two-year internship at Emergency Hospital, he became Superintendent of Eastern Dispensary and Casualty Hospital, a position which he accepted in 1917. A year later he was commissioned lieutenant in the Medical Corps of the United States Army. Assigned to the 48th Field Ambulance Corps, 37th Division of the British Expeditionary Forces, he was one of 1,600 American physicians loaned to the British forces. In the succeeding months of war, he was attached to the orthopedic department of Base Hospital No. 9 of the American Expeditionary Forces in France, and the Base Hospital at Camp Lee, Virginia.

Returning to private life in 1919, Dr. MacDonald engaged in general practice and soon established himself as one of the outstanding practitioners in Washington. Energetic and possessing executive ability to an unusual degree, it was natural that he should become prominent in public affairs. In 1928 he was appointed Deputy Coroner for the District of Columbia, being advanced four years later to the post of Coroner which he has held ever since.

Long active in medical organizations, Dr. MacDonald is at present a member of the Medical Society's Committee on Military Affairs and the District Procurement and Assignment Committee.

Dr. MacDonald was married in 1932 to Helen V. Pinkowski of New York State. They have a daughter, Andrea.

An indefatigable worker, Dr. MacDonald has no particular hobby and he vacations rarely. He is one of those fortunate individuals who find complete enjoyment and relaxation in their work. The strenuous life he leads therefore does not weigh heavily on him as is evidenced by his youthful appearance and buoyancy.

It is the Society's good fortune to have a wartime president of Dr. MacDonald's vigor and ability, especially when these qualities are supplemented by wide experience in public affairs, an intimate knowledge of current medical problems, and a strong sense of duty. Physicians of the District of Columbia may well feel confident that they have chosen as their leader in these critical days a colleague who will measure up fully to his responsibilities.

ANDREW MAGRUDER MacDONALD, M.D.
President, The Medical Society of the District of Columbia, 1942-1943

THE PASSING OF AN ERA

According to Dr. C. S. Busey, pioneer Washington physician, the Medical Society of the District of Columbia was one of twelve medical societies in the United States which in 1894 had reached the age of seventy-five years, having been chartered by Congress on February 16, 1819. The Society's history therefore spans nearly that of the nation.

The manner in which it has met changing conditions in the one hundred and twenty-three years of its existence is to be found in a history prepared some years ago by a committee of leading Washington physicians, covering the period 1817 to 1909. From it we learn that the Society was continuously alive to problems of the day and that its record is one of which present-day physicians may be proud.

In the early days, the Society fought for higher standards of medical practice and the elimination of quackery, which flourished at that time. Later it struggled valiantly to gain acceptance of public health measures, many of which are now taken for granted. Sanitary conditions were especially bad in the District of Columbia and the Society's successful efforts to improve them was a splendid achievement. For these and many other contributions to the improvement of the health of the community, the people of Washington are indebted to the Society.

Up until World War I, the Medical Society, in common with other organizations, found little difficulty in adjusting itself to changing conditions. Life in the nineties and at the beginning of the century was serene. However, the impact of the War was terrific and throughout the turbulent twenties and thirties life became increasingly complex. It was during this period that the medical profession found itself confronted with serious issues of a socio-economic nature.

It might be said that the last two decades have been ones of controversy, exploration and experimentation. Following the attack on Pearl Harbor this period came to a close and we entered upon a new era. Life is not only going to be different, but it is different. At present all of our energies are directed toward one goal—victory—and so it is natural that many peacetime activities of organizations as well as individuals are being shelved for the duration.

The question arises in the minds of many, "What will conditions be like following the war?" Physicians express varying opinions, some taking the view that a Government system of medical care is inevitable. Many who are now going into military service are dubious about ever returning to private practice. This, of course, is merely speculation. The scrapping of an established system is not done over night. However, one cannot ignore the trend of the times and the philosophy expounded by the country's political leaders. For example, one hears the argument that production has reached its maximum of efficiency but that there is a serious lag in distribution. This, it is said, not only applies to goods but to services. If this is the belief of those who will guide the destinies of this nation following the war, the leadership and resourcefulness of the medical profession in this country will be challenged.

There is a legitimate basis for the view that more efficient methods of providing medical care to all of the people are needed. This being so, medical societies should concentrate on this problem, confining themselves to a much narrower field of activity than heretofore. Too frequently in the past their activities have been of little value to the profession or the public, either because these organizations undertook too many projects or did not have the resources or the personnel to complete the tasks they had undertaken. It would seem, therefore, that two major problems should receive their attention in the future: (1) the advancement of medical science, and (2) the distribution of medical care, both preventive and curative. In regard to the second objective, the coöperation of understanding lay groups and public officials is essential. Even under the most favorable circumstances difficulties will be encountered which will require good judgment, patience and fortitude.

One need not approach the era upon which we are entering with two much trepidation. In fact, there will be greater opportunities for service to the people than there have been in many generations. The Medical Society of the District of Columbia, if it lives up to the traditions of the past, will take full advantage of them.

COURT OF APPEALS AFFIRMS CONVICTIONS

On June 15, 1942, the Court of Appeals, speaking through Associate Justice Miller and with the concurrence of Associate Justices Rutledge and Martin, affirmed the judgments convicting the American Medical Association and the Medical Society of the District of Columbia of violating the Sherman Anti-Trust Act.

While a multitude of questions were raised on the appeal, the Court saw fit to discuss only a few of the propositions of law involved.

In view of the recent decision of the Supreme Court in Apex Hosiery Company v. Leader, 310 U. S. 469, which is now generally considered as greatly limiting the field and scope of the Sherman Act, the Court of Appeals construed the charge in the indictment quite differently than it did in its first opinion. The Court said: "If a conspiracy was shown, the purpose of which was to restrain competition, raise prices or otherwise control the market, to the detriment of purchasers or consumers of medical or hospital services, by destroying or injuring Group Health Association, it was sufficient to sustain the conviction."

In order to make this rule applicable, the Court adhered to its former ruling, holding the practice of medicine was a "trade" and that the interrelated activities of the hospitals and Group Health Association in making available and financing medical services also constituted "trade" under the Sherman Act.

After this conclusion the Court proceeded to discuss whether or not the provisions of the Clayton and Norris-LaGuardia Acts covered the dispute over employment by Group Health Association of members of the profession and precluded this prosecution under the principles laid down in United States v. Hutcheson, 312 U. S. 219.

Oddly enough, while admitting that the professional or pseudo-professional groups closely resembled or might even be doctors' or lawyers' "unions," the Court held that to apply the Acts would be to cast medical doctors in the role of laborers. The Court then drastically limited the scope of the Clayton and Norris-LaGuardia Acts and held that they included only disputes of working men, wage earners or laborers on one hand, and aggregated capital on the other.

Following out this argument, in disregard of the fact that it had already held a doctor to be in trade and a tradesman, the Court concluded that a physician is not a workman or laborer and his compensation is not wages. Hence, the Acts were not intended to cover the controversy as it exists in the present case. This drastic curtailment of the scope of the Clayton and Norris-LaGuardia Acts seems to ignore the fact that the Acts cover not only trades but any industry, craft or occupation. It is hard to conceive how a doctor can be in trade and at the same time not be in trade or in an occupation.

Next, while admitting that the Court had held in its former opinion that "any justification for the restraint, so as to make it reasonable as a regulation of professional practice . . . must be shown in evidence as a defense," the Court brushed that ruling aside with the statement that any regulatory acts on the part of physicians, in the absence of an express delegation of power from the legislature, which injured others, amounted to restraints upon competition. In this aspect of the opinion, the Court made it plain that the activities of other professions, such as the practice of law, are subject to prosecution under the Sherman Act, if the rules and regulations of the legal or other professions "impose unreasonable restraints."

While the Court in its first opinion seemed of the opinion that the illegality of the activities of Group Health Association was relevant to the issues involved and might be a defense to the charge of restraint, because the Court discussed the merits of the contention at length in that opinion, it now concludes that even illegal activities are entitled to the protection of the Sherman Anti-Trust Act, the theory of the Court being that if people combined to prevent the commission of a criminal activity, which is "trade" under the Sherman Act, they may be indicted and convicted for a violation of that Act. The Court argued that the prevention of illegal activities is "extra-legal" and belongs to the legislature and not to the citizen.

In upholding the admission in evidence of activities of the American Medical Association throughout the United States antedating the conspiracy period described in the indictment, even against the Medical Society of the District of Columbia, the Court said such "evidence was admissible as bearing on the intent of the Association in respect of the actions which are the subject matter of the indictment," and that it made no difference that the activities were legal when and where performed.

Lastly, the Court discussed the anomalous verdict of the jury convicting two inanimate corporations of a conspiracy, which is essentially a crime of intent, without the intervention of any human agents. It is difficult to conceive how a corporation can enter into a contract of conspiracy involving a "specific criminal intent" without acting through human agents. The problem, however, presented no difficulty to the Court which stated that "the fact that a corporation can act only by human agents is immaterial" and "the conviction of appellants does not depend upon the guilt . . . of their agents."

In a blanket statement, the Court concluded its rather startling opinion with the sweeping ruling that all other contentions raised by appellants were "without merit" and affirmed the verdict of conviction.

In the next thirty days the American Medical Association and the Medical Society of the District of Columbia will file a Petition for a Writ of Certiorari with the Supreme Court of the United States, seeking a review of the decision and judgment of the Court of Appeals.

Warren E. Magee

PERTINENT PARAGRAPHS

June Meetings

Although meetings of boards and committees continued, they were fewer in number in June because of the annual meeting of the American Medical Association at Atlantic City, June 8–12. A large delegation of the Society's officers and members were in attendance.

The following meetings were held during the month of June:

June 3	Committee on Procurement and Assignment
June 4	Obstetrical Board
June 18	Committee on Procurement and Assignment
June 19	Subcommittee on Pan American Exhibit, Annual Scientific Assembly
June 22	Executive Board Committee on Public Policy
June 25	Interprofessional Conference

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Public Health in Wartime

In the reports made at the Annual Business Meeting held on May 6, it was emphasized that some of the peacetime activities of the Medical Society would have to be suspended and others of an essential nature would be affected by the war. Of the latter, one of the most important is the Periodic Health Examination Program. Considerable planning went into this project and it has been as widely publicized as conditions would permit.

Despite the urgent need for a broader application of this preventive procedure in the District, the Program has unavoidably lost momentum. However, it is still receiving as much attention as can be devoted to it. Members of the Society can be of great assistance if they will discuss with their patients the value of periodic examinations and distribute the pamphlet, "Protect Your Health." Pamphlets, examination forms and cards to be given persons examined are still available at cost through the Society's office.

While the future progress of the Periodic Health Examination Program will depend in large measure upon its acceptance by the public and the efforts put forth by the Society's officers and committees, equal responsibility for its success rests upon the active interest of members. Unless they demonstrate their belief in periodic examinations, public response which may be obtained through publicizing the Program will accomplish very little. In the final analysis the success of the Program will depend largely upon the general practitioner and the internist. Without their support, the undertaking will be just another gesture.

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Luncheon Meetings Proposed

Because of the unusual conditions which have existed in Washington during the past year, attendance at scientific meetings has suffered considerably. Physicians, particularly those engaged in general practice, have been busier than at any time in the recollection of the oldest practitioners. Outside of their practices, heavy demands have been made upon their time by Selective Service, Civilian Defense, and other agencies related to the war effort. The result has been that physicians are putting in extremely long days which leave them too weary to attend meetings which do not afford relaxation as well as instruction.

Steps are being taken by the Medical Society to meet this situation. It has been proposed to the Executive Board that luncheons be substituted in the coming organization year for some of the regular evening meetings. It is believed that practitioners having evening hours and specialists who now remain in their offices until late will find the noon hour more convenient and a welcome break in a long day. Tentative plans call for the presentation of one paper at each luncheon so that there will be time for relaxation and an opportunity to fraternize.

The Board looked favorably upon this proposal and will recommend to the incoming Program and House Committees that they seriously consider experimenting with this type of meeting. The building is well equipped for luncheons and the cost to the membership should be moderate.

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Society Makes Another Contribution

The Society's membership need not be told of the contributions being made by individual physicians in the present emergency because there are very few who have not given of their time to the war effort. However, it is not so well known that the Society's building has been made available to organizations whose interests lie in the field of medicine or public health. A number of them have requested the use of the auditorium for the reason that there are no others available to them in Washington. Auditoriums in some of the larger Government buildings are being used as offices and organizations which formerly met in them have had to go elsewhere. Both the House Committee and the Executive Board agreed that it was the Society's duty to open the doors of its building to these groups until the emergency has passed.

Among those that have recently held meetings in the auditorium are the District of Columbia Dental Society, State and Territorial Health Officers, United States Public Health Service, District Health Department, officials of the D. C. Selective Service System and members of local draft boards, and the Washington Ophthalmological Society.

In some instances organizations have been requested to pay the expenses incidental to the use of the auditorium. Expressions of gratitude for the courtesies shown by the Society have been received from all of the above organizations.

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Health Studies Listed

In the May 29 issue of *Public Health Reports*, the weekly publication of the United States Public Health Service, there appears a list of publications which have resulted from studies made in connection with the National Health Survey, a project carried out by the United States Public Health Service with the aid of grants from the W.P.A. The studies cover the period 1935–1936 and include "(a) a house-to-house canvass of sickness and medical care among 2,500,000 persons in 83 cities and certain rural areas; (b) a communicable disease survey in 32 cities; (c) special studies of health and medical facilities in the counties included in the above house-to-house canvasses; (d) a special audiometric study of hearing loss in a sample of the surveyed population; and (e) transcripts of records of industrial sick benefit organizations."

There are 126 publications listed under the following headings: General Illness Findings, Medical Care, Hospital Facilities, Out-Patient Department Facilities, Public Health Agencies, Occupational Morbidity and Mortality, Chronic Disease, Accidents, Impaired Hearing, Other Specific Diagnosis Groups, Illness and Medical Care in Childhood, Unemployment and Illness, Housing, Fertility, Family Composition, Other Population Subjects, and Miscellaneous.

Members desiring a list of the topics can obtain it by calling the Society's office. Copies of these publications are obtainable from various sources.

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Additional Bureau Equipment Installed

As previously announced in the ANNALS, the demand for MEDICAL BUREAU Secretarial Service has increased to a point where additional equipment was necessary. A new secretarial switchboard was therefore installed on June 15. The BUREAU is now prepared to accept at least thirty more subscribers to the Secretarial Service. Those who desire the private wire arrangement should call the Society's office. Rates will be furnished upon request.

Subscribers to this type of service have been most enthusiastic about it. It provides as complete telephone coverage as possible.

The BUREAU's membership showed a further increase when the summer and fall telephone directory went to press. It now stands at 206. On December 1, 1940, when the BUREAU opened, there were 115 subscribers.

The BUREAU is an important defense agency. It not only transmits messages to physician-subscribers but responds to thousands of inquiries which are received, mostly from new arrivals in Washington. In the event of an air raid, it will handle calls for physicians received from the Control Center of Civilian Defense in the District over a special wire. Certainly establishment of the BUREAU is one of the real contributions made by the Society to the health and security of the community.

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More About Medical Costs

So much has been written in recent years on medical costs one cannot conceive of anything new being added to what has already been said. Despite this fact it is certain that this subject will continue to be a lively topic of discussion until a generally satisfactory solution has been found.

Fortunately there are those who write more interestingly on medical costs than others and, too, they have something to say. Dr. Malcolm L. Raymond, whose article on rural medical problems appeared in the May issue of the *Pennsylvania Medical Journal*, is one of these. He says: "Two causes interfere with giving the best in services to all. The highly trained physician remains in the larger medical centers. Yet over one-half the population and the present trend are rural. The method of rendering service remains the same as in Colonial days, each physician a lone individualist. Yet the complexities and costs of prevention and of diagnosis and treatment steadily increase." He lists four "unsolved problems": (1) effective preventive medicine; (2) local consultations, and with specialists, providing needed, continuous postgraduate instruction; (3) emergency bed-care; (4) a painless method of payment where needed. The solution, Dr. Raymond believes, lies in the establishment of community medical centers.

In reply to the question, "How establish such clinic-centers?," he says, "If our lawmakers must do something besides finding us collectively guilty as a trade organization, how about providing some good workshops? Rather than trying to devise some broad expensive plan and attempting to fit it like a poultice to the whole country, they might better vote the funds as grants-in-aid, leaving it to the state, county, and community to share the costs. Each center would be fitted to local needs as determined by the local profession and laity consulting together.

In summarizing, Dr. Raymond makes these statements:

"The majority of our people, in rural areas, are in need of better care, better distributed.

"The local clinic-center provides a sane solution, compromising between our present archaic system and government health insurance.

"The latter is threatened because the many experiments tried stress the matter of cost only. The politician feels that he can 'go us' one better in financing any public service, even medicine.

"With the apparent cheapening of human life by accidents and warfare, we must be more vitally concerned in conserving our human resources.

"We submit that there exists a challenge to organized medicine to advocate and work for such clinic-centers."

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Impressions of the A.M.A. Meeting

The 1942 meeting of the American Medical Association held at Atlantic City, June 8–12, was in every respect most successful. Attendance was surprisingly large, considering the difficulties of transportation and present-day costs of traveling. The immense main arena of the Auditorium and the floor beneath it were filled with exhibits which were viewed by throngs of physicians and their families who never seemed to tire of the "big show." A splendid audience turned out for the public meeting to hear the President's Address. Scientific meetings, it is reported, were exceedingly well attended.

Washingtonians were very much in evidence. Both the George Washington and Georgetown groups held luncheons. Figures familiar to every physician in this community could be observed all along the boardwalk which, by the way, has taken on quite a different appearance during wartime, being dimmed out at night to a point where one must watch his step. Street lights along the walk have all been painted in such a manner as to prevent them from being seen offshore. Upon arrival guests were surprised to find the city in comparative darkness and the hotels with all curtains drawn. However, as time goes on, one becomes accustomed to the shadowy streets and the curtained shop windows. Some of the latter have no curtains but use blue lights which give an eerie appearance.

All of this did not dampen the spirits of the visitors. In fact, everyone carried on as usual and from appearances gave little thought to the dangers which lurked just beyond the horizon.

War Section

THE URGENT NEED FOR DOCTORS*

HONORABLE PAUL V. MCNUTT

Federal Security Administrator; Chairman, War Manpower Commission

Long before Pearl Harbor the American Medical Association established a Committee on Medical Preparedness. Long before America as a whole was ready for the total mobilization of its manpower, your committee undertook a census of physicians and visualized a plan for matching physicians to the needs of a nation at war.

The Procurement and Assignment Service was established at the suggestion of the American Medical Association. Your Association it was which worked out with the Selective Service authorities the plan for deferment of medical students and interns. Largely through your help medical education has been adjusting itself to war needs.

I need not call the roll further. I need not cite your collaboration with the Office of Scientific Research and Development and the National Research Council and many other professional groups. Through your journal you know the work your Association has done. But it is my privilege to have worked with you, and my pleasure to congratulate you on your vigorous action. No other part of the total manpower job is so well blueprinted today as is the mobilization of medical service.

It is fundamental that I acknowledge the work you have done, for I am about to deliver a very serious speech. Whatever the physical circumstances may be, it is not the kind of speech usually thought of as an "after dinner speech."

This is war. And war has brought to every American obligations so heavy that we have not yet realized the fundamental sacrifices that we must make.

In every walk of life manpower needs are being studied. Every American will be called upon to do whatever is necessary to achieve victory.

America has selected your sons and your neighbors' sons for service with a citizen army. That army is fighting beyond the seven seas in order that America may be quite certain we shall never have to fight on our own beaches. To establish the security of the American Way, we are risking the lives of our young men for victory.

And I need hardly tell you that no limitations of convenience or economic interest shall stand in the way of giving them full and complete support at home. That is a commitment from us to every man in the military forces—a commitment which was implicit in his enlistment or selection.

In determining what is necessary we are now engaged in the total "diagnosis" of America's manpower needs.

And when the "diagnosis" is complete the "treatment" of each worker, the disposition of each case, will be based upon our best and most objective analysis of the facts.

No labels will stand in the way. No a priori theories of political or economic organization can stand in the way of effective action. Those principles which support effective action will stand. Any others will have to suffer a moratorium.

In doing that we are taking a leaf from modern medicine. You probably still know among your colleagues—as I do not—certain cloisters of the mind which limit their objectivity, but in general the old barriers of doctrine, the homeopaths versus the allopaths, have passed away. As T. V. Smith has put it, these "paths, like the paths of glory, lead only to the grave." No obstructive hedge of theory must stand between the patient and the doctor's best professional skill.

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* Address before the House of Delegates and officers of the American Medical Association, Hotel Traymore, Atlantic City, N. J., June 8, 1942.

This is war. We are out of the cloisters of words. We must look squarely at the facts. Let me describe some of the symptoms of our case on June 8, 1942.

Let me present them simply in terms of a series of hard unpalatable facts. Whatever the state of other skills, professional and otherwise, in the reservoir of America's manpower, yours is a profession which can face the facts.

1. We are not getting enough volunteers. We are not getting as many volunteers as the Procurement and Assignment Service expected we would have by this time. It is absolutely necessary that there be an immediate and significant increase in the number of volunteers, or else some other method of procurement will be required soon.

Slightly over 3,000 physicians, who were not obligated by reserve commissions, volunteered in the first six months of this war. By contrast, 12,000 volunteered in the first six months of the last war.

An army of nine million will take 12 per cent of our male population. Present Medical Corps ratios indicate the armed forces will require 33 per cent of all our physicians (including retired men), two thirds of all those under the age of 45.

Several thousand physicians are needed by July 1, and more physicians must be drawn into the service in the next six or seven months than the 22,000 taken during the past 18 months. Another 10,000 will be needed in 1943.

Some states are ahead of their reasonable and expected quotas. Others are from hundreds to thousands behind their quotas. There is evidence that there are still some areas in America which have not yet fully discovered the war.

This is no statement of opinion. This is a statement of some very hard facts. I deliver them without the slightest hint of bedside manner for your earnest consideration.

2. And remember this: The Army and Navy are not the whole story. There is yet far too little consciousness of any problem beyond that of obtaining physicians for the Army and Navy. The acute need for civilian service is not yet appreciated. There will be no "business as usual" for physicians at home—any more than there can be for the physicians in the military service.

The American Medical Association's Council on Industrial Health and Dr. Selby's Committee on Industrial Hygiene, Health and Medicine have aided in the establishment of many industrial medical services. They have helped to create educational programs to train physicians for such services.

But for the most part that development has been directed to large plants. There is no well recognized plan as yet for the small plant. The mere general recommendation of "coöperation with local practitioners" is not enough. It has not produced results.

And as industrial physicians have so often reminded us, industrial health does not begin and end at the factory gates. Home and community sickness cost America more man-days in time lost than do occupational accidents and occupational illness. The home and the community, therefore, cannot go unserved in wartime.

Dr. Lahey and Dr. Abell, and those who appreciate the great responsibility of American medicine, know and understand these needs. It is time, I think, for a concerted drive to bring home to every doctor the importance of the local civilian problems of medical care in boom areas—a drive that will bring the necessary action.

Let me underscore the need for doctors in industrial areas and in defense boom towns. The community that is growing, as some communities have from rambling rural villages of a thousand people to towns of 30,000 and 40,000 and 50,000, must be taken care of. Doctors will have to be assigned to them on a voluntary basis or on some other basis.

3. There is, and there will be a growing problem of rehabilitation. Mechanized warfare means more casualties despite all physicians and engineers can do. Perhaps there will be fewer deaths, but more mashed fingers, injured arms, crippled legs.

With mechanized equipment the industrial process is multiplied manifold. With high pressure production accident rates go up. Thus, added to our training and our battle front casualties there will be a vast increase in industrial casualties.

The casualty prospect adds to the acuteness of our need for doctors in the military forces. It adds greatly to our need for doctors on the industrial front. And there is the added responsibility for rehabilitation which arises out of the nature of total war. We need every man-hour on the production line—and therefore we need every man-hour of medical service.

We face a sad prospect. Total war has made a fundamental change in our attitude toward the disabled. We can no longer regard rehabilitation as a humanitarian or "welfare" measure designed to salvage self-respect or provide incidental income for the disabled individual. He is a person, a valuable person. He must be rehabilitated, and vocationally trained, not merely for his own good but because the nation needs him. He must be vocationally trained not in some obscure handicraft, the products of which are intended for Fifth Avenue Shops or roadside tourist stands, but in skills that will fit him for a place in the main stream of American production. Industry must not disqualify him for his disabilities; it must qualify him for his abilities.

Thus the rehabilitation problem includes not only the rehabilitation of rejectees, but the rehabilitation of men who suffer their disability because they served their country in the military service or on the production line.

4. A total systematic plan is necessary to meet these needs. Manpower must be conserved now.

But I think the situation presents to the American medical profession an opportunity. You are familiar with the advances in clinical medicine which came out of the last war. You know the advances in bone surgery and plastic surgery and in the care of wounds. You know full well the height to which your profession rose under the terrible pressure of war. You are faced with even greater and more challenging problems now. You will rise to new heights which will be all the higher because in this last quarter of a century you have developed so beautifully in medical education and scientific research.

In addition, however, to your problem of the last war you face the acute social problem presented by total war. There must be no break anywhere in the fabric of our national effort. Those breaks come only when America's fundamental resources, the health and vitality of its people, break down.

Just as clinical medicine progressed in 1917–1918, this time America can look forward to your firmer mastery of the management of its medical services. I hold no brief for any a priori plan. I hold a brief only for the application of the same scientific objectivity to problems of the organization and distribution of medical services as they are applied to clinical questions.

That will serve to outline our main problem. Here are some of the prescriptions which are indicated.

1. For the military services younger men must go. They must realize their duty now. The armed forces need thousands of young doctors immediately —to be exact, 5,000 by July 1; 20,000 during the next seven months.

They must make whatever arrangements are necessary for their older associates to handle their practices. The older men in turn must remember that they had their chance last time. They must not only stay, but must extend the scope of their activities to meet the medical needs of the civilian communities.

2. The medical profession must coöperate in every local community as vigorously as your national organization is now coöperating. It must obtain physicians in sufficient numbers for the Army and Navy. It can also take action to allocate men to important positions in industry and in civilian life. Having accomplished those two important military duties, the profession should certainly have no fear of any marked change in medical practice after the war.

3. Let me make this clear. The Procurement and Assignment Service for the War Emergency was set up in collaboration with the medical profession to facilitate the channeling of physicians to military and civilian service. It will not continue after the war. "All out" collaboration does not involve any theoretical assaults upon, nor support of, any theory of medical practice.

The Procurement and Assignment Service, with which every physician should and must collaborate to the full, is staffed by physicians, guided by physicians and represents every one of you in the worldwide application of the simple but profound obligations of the Hippocratic oath.

There was nothing of theory in the establishment of the Procurement and Assignment Service. It was a proposal to solve in a practical manner a problem of great urgency. It was not imposed by the Government. It was set up, I repeat, at the suggestion of your profession. It investigated all aspects of the problem of providing doctors in an equitable way for military and civilian service. It made the arrangements with Selective Service for the deferment of medical students. It has safeguarded your professional interests in every way.

At the same time it has accepted the obligation to deliver the doctors the Nation needs to the points where they are needed.

Now let us look at the record.

The plain fact and conclusion is simply this: The Army and Navy and the war industry areas have not gotten the doctors they need. The careful safeguards that were set up by the Procurement and Assignment Service have apparently slowed down the rate of recruitment. The voluntary plan must work and work promptly—or some other more vigorous plan will have to be produced.

Yours has been an outstanding effort in canvassing and classifying every member of your profession. You have still in your hands the machinery by which a self-governing profession can demonstrate its ability to meet the tremendous demands of total war. And I appeal to you to make that machinery work.

Yours is an important profession. It is the first to require rationing—rationing which will make sure that there are enough doctors to meet the needs of every unit of the home front and of the battle front. The issue is who shall do the rationing, for America must have the doctors it needs.

PHYSICIANS IN GOVERNMENT SERVICE*

Warren F. Draper, M.D.

Assistant Surgeon General, United States Public Health Service

As Government becomes more involved in the medical problems of the future it is to the best interest of all concerned that its medical officers should be men of broad vision and understanding, qualified by education and training to uphold the traditions of the profession and to join with its ablest members in working out the best solutions of the difficult problems we are sure to have to face. I am still quite mindful of the general impression that prevailed in our school in 1910 that one who entered one of the medical services of the Government was wasting any chance he might have had for success and satisfaction in the field of medicine.

Now that so many physicians from private life are entering the various Government services to remain for the duration of the war, it is inevitable that we should learn much from the experiences of each other. Many of the leaders of the American Medical Association, including Dr. Frank H. Lahey, its President, are devoting intensive effort to the problems of medical service of the Government and are giving unstintingly of their knowledge and experience in finding ways of meeting the great demands that are placed upon us. Surely with the knowledge gained from our efforts in a common cause we shall have a comprehensive understanding of the medical problems of the day and be in a much better position to present a united front in formulating and putting into effect the plans that will need to be made for supplying the medical needs of the future.

On various occasions it has been my duty to meet with the 250 or more candidates who apply each year for the entrance examinations for the Public Health Service. It is customary to have a rather intimate personal discussion with each one in an effort to find out what sort of a person he is, what are his motivations in applying for the Service, and what might be his aptitude for the work we have to do. One of the things that has interested me very much is the philosophy of young physicians who have been established in practice for several years in small towns and out-of-the-way places. When these boys come before the Service Board for examination I have made it a point to ask them what it is that has led them to want to make such a drastic change in their lives. After all, they have invested time and money and a great deal of hard work and study in a medical career. They have set themselves up in practice prepared to carry out the high ideals of medical service to the people. Now after a brief experience they want to leave all this and are anxious to come into a regimented service where they will lose their independence and be subject to orders from those in higher authority for many years to come. Why, I ask them, are they doing this? What is it that has happened to them that makes them want to pull up stakes and engage in such a revolutionary change. The composite answer of all is about as follows:

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* From the President's Report to the Harvard Medical Alumni Association at its meeting in Atlantic City, N. J., June 10, 1942.

"Yes, it is true that we have made a big investment in a medical career. We have had high ideals of service and we have wanted to apply our medical skill and learning and all the modern facilities for diagnosis and treatment to the people who come to us for relief. But what we find is this: We are unable to follow through in our treatment of too many of our patients. Hospital care is either not available to them, or they are not able to meet the expense or they are unable to remain a sufficient length of time to insure recovery. We are able to do only a part of what we should and what we want to. It is unsatisfactory to be able to relieve only the acute condition and to know that there will probably be a relapse that we have no opportunity to prevent.

"And then there is another thing: Either our patients are unable to pay for the diagnostic procedures that are necessary for us to have a correct knowledge of the case or else the diagnostic facilities are not available. Therefore we are obliged to forego the vitally important aids to proper diagnosis and treatment we have learned and we know that we are doing only a fraction as well as could be done. We have seen around us the results of practice of this kind. We are discouraged at the reports we hear from the well equipped medical centers on some of the patients who have received treatment from physicians who have had to practice too long without adequate facilities and we are unwilling to use only part of the skill we have gained at such expense. Before it is too late and we have forgotten what we know and have become resigned to the practice of medicine of an inferior type we want to get away and go where we can use to advantage the things that we have learned and keep abreast of the times. We want to feel that we are doing for our patients the best that can be done. We are ready and anxious to go into your Government hospitals and carry out the orders that are given us if by doing so we can follow through on our cases and know that we are keeping abreast of the times."

It seems to me that there is a lesson to be learned from these young men. They are the type who are needed in the communities they are leaving or to which they refuse to go. And they need the people who need their services. Here is a field of opportunity that has not yet been reached. When the present war is over we shall need to find the right answer to this problem. A beginning has been made but I am sure that we should all agree on the wisest course to follow and go forward on a united front. May our knowledge and understanding of each other gained from close association in the days immediately ahead contribute constructively to this end.

OUR NURSING PROBLEMS

Edith M. Beattie, R.N.

Executive Secretary, Graduate Nurses' Association of the District of Columbia

To the majority of members of the medical and nursing professions who are responsible for the health of the Nation, the fact that there is a serious situation existing in our hospitals today is not surprising. Leaders in the nursing profession have realized for some time that, as Federal health services expand, civilian hospitals will find it increasingly difficult to secure staff nurses.

In July 1940, in anticipation of present conditions, the national nursing organizations organized the Nursing Council on National Defense to coördinate defense activities of all of the groups represented and to administer the national program in accordance with the functions and policies of these organizations, in order to avoid confusion and overlapping of effort. Further, the Nursing Council was to work closely with the Subcommittee on Nursing of the Health and Medical Committee of the Office of Defense and Welfare Services, and to coöperate with the Office of Civilian Defense.

Recognizing the fact that an emergency was fast approaching, a National Inventory of Registered Nurses was undertaken in October 1940 in coöperation with state nurses' associations and the United States Public Health Service, in order that they might know where nurses were located, what they were doing, and what service they were prepared to give. When the 289,286 questionnaires were returned from the state nurses' associations to the United States Public Health for tabulation, it was noted with concern that approximately 50 per cent of the unmarried nurses between the ages of 21 and 40 were in institutional work.

The Red Cross, about this time, with its usual foresight, was launching a nation-wide campaign for nurses, "between the ages of 21 and 40," for the First Reserve, from which the nurses for the Army and Navy Nurse Corps are drawn. The Civil Service Commission was also offering positions with salaries and opportunities rather tempting to a group which was even then beginning to protest against low income and lack of opportunities for advancement.

Defense areas were springing up all over the country, necessitating an expansion of the public health program. Recruits were, of necessity, drawn from local health agencies which, in turn, began recruiting nurses from the ranks of new graduates who are usually available for staff nursing.

It took very little intelligence to see the problem; it took keen foresight and careful planning to decide how to meet it. How could we assure good nursing care for our armed forces without placing the burden upon institutions which were already suffering from lack of personnel?

The answer was to increase our supply of nurses and to dilute nursing by providing teaching and competent supervision for volunteers and other auxiliary workers. How was this to be accomplished? By an intense recruiting campaign to increase the enrollment in good schools of nursing by 10 per cent, to urge inactive nurses to return to their profession, to find voluteer teachers for Red Cross Home Nursing and Volunteer Nurses' Aides Classes, and to secure volunteer supervisors of nurses' aides in the hospitals. A National Committee on Recruitment was recently appointed to put this campaign into operation.

Immediately, other problems presented themselves. Many schools of nursing were unable to increase enrollment without expansion of teaching and housing facilities, and a number of eligible young women were unable to meet the expenses of nursing education.

In July 1941, an extensive nursing education program was made possible by a Congressional appropriation of $1,250,000 (later increased by $600,000 in 1941; $2,000,000 in 1942) to be used for expansion of basic courses, for the establishment of refresher courses for inactive nurses, and for postgraduate and clinical specialties.

Early in November 1941, the President of the Nursing Council on National Defense recommended that State Nursing Councils be formed with representation and objectives comparable to the National Council, through which the National Council could work. This was done immediately and each State Association, including the District of Columbia which functions as a state, began to carry on its defense program in earnest, working closely with the national organization.

Our Committee on Nursing Information, which had been carrying on a recruiting campaign all during 1941, became the Committee on Recruitment and intensified its efforts to bring educated intelligent women into the profession. Schools of nursing were encouraged to take as many students as possible, consistent with standards of good nursing education. Newspapers and radio stations assisted by giving publicity to our program. Leaders in church groups, women's clubs, girl scout troops, and civic organizations were asked to help. School counselors were also very coöperative. Speakers were sent to junior and senior high schools, junior and senior colleges, and private schools. Hundreds of informative pamphlets prepared by the National Nursing Information Bureau and Council on National Defense were distributed to potential students and to libraries, schools, etc. As a result, hundreds of inquiries poured into our office. Others visited the headquarters for information.

There has been some criticism of the fact that, due to the emergency, requirements for entrance to schools of nursing have not been lessened; that we are appealing to the best of high school graduates, to college graduates, or to those with some college work. The profession feels, however, that with the responsibilities and problems which are and will be confronting nurses, women of intelligence and of superior education will be better equipped to carry the burden. We are paying particular attention to the personality of an applicant, to what her records show about her leadership and ability to meet people and situations. We want no misfits.

In the present emergency, when nurses are so badly needed, every student who fails to complete her course represents a serious waste of educational resources and a serious loss to the public and to the nation. A survey by the National League of Nursing Education shows that 30 per cent of the students fail to complete their training, and that of this number 30 per cent more leave because of personality adjustment difficulties. Although we have heard the statement, "So much education is not necessary for a nurse—all she does is carry out the doctor's orders," we have noted that the refined, intelligent nurse is always in demand, especially when a doctor knows that an intelligent understanding of a case as well as a correct interpretation of orders may be important factors in restoring his patient to health.

Our first refresher courses were given in the local hospitals in May 1941. The courses extended over a period of nine weeks, three weeks being devoted to each of the following subjects: medicine, surgery and obstetrics. They were designed to bring nurses up to date on the newer medications, procedures and equipment. The League of Nursing Education set up a standard curriculum. Between May 1941 and June 1942, 125 inactive nurses enrolled, most of whose names were taken from the 300 listed in the survey as "inactive, willing to help in emergency." Only 98 finished the full nine weeks; approximately one half of these are engaged in some form of nursing at present. The reasons given for failure to work center around home responsibilities; a few have children and find it impossible to find a maid to care for them; others cannot afford to pay a maid and carfare on the prevailing salary. All, however, are willing and prepared to render service in extreme emergency.

Following the declaration of war, our programs were accelerated and expanded. Our Nursing Council on Defense became the Nursing Council for War Service. To our recruiting program was added the necessity of organizing nurses for duties connected with Emergency Medical Services. The responsibility for recruiting nurses for military service, and the promotion of home nursing classes and classes for volunteer nurses' aides were delegated to the D. C. Committee on Red Cross Nursing Service. Graduates with teaching ability have been sought as teachers of Red Cross classes. The Council sponsored special Instructors' Classes in First Aid for those nurses who were willing and able to teach. Over 125 received teachers' certificates. Many of them have been teaching groups of nurses or people in their own community. A number of our hospitals, the Instructive Visiting Nurse Society, and the Public Health Nurses had already organized First Aid Classes for members of their staffs months before Pearl Harbor.

The Committee on Defense sent letters to all hospitals and heads of nursing services, advising the immediate immunization of all nurses against smallpox and typhoid. If a condition should arise which would necessitate wholesale immunization of the civilian population, our nurses, having anticipated such an emergency, will be prepared to render assistance.

Since January 1, 1942, the Council has promoted three Institutes, planned to assist the nurse in preparation for emergency service: a two-day Institute on Communicable Diseases, a series of lectures on Treatment of Eye Diseases and Emergencies given at Episcopal Eye, Ear and Throat Hospital by Dr. Frank Costenbader, and an Institute on the Care of the Newborn given at Sibley Memorial Hospital by Miss M. Cordelia Cowan, Executive Secretary of the Nurses' Examining Board, and a member of the Committee on Nursing Arts.

At the invitation of Dr. Oscar B. Hunter, all members of the Graduate Nurses' Association were urged to attend the Postgraduate Courses given by the Medical Society of the District of Columbia on "The Modern Treatment of Burns" and "The Prevention and Treatment of Chemical Casualties."

Up to this point, I have endeavored to explain briefly what has been done by the nursing profession over a period of many months to prevent a shortage of hospital personnel. We professional people who are responsible for the health of the community recognize fully that a serious condition does exist in our local hospitals. Aides, maids, orderlies, elevator operators, all of whom contribute in some measure to the care of the patient, are accepting better paid positions. In many hospitals, the depleted intern staff is creating a serious problem.

The general duty nurse, already overworked, must take on many of the duties formerly given to the aide and must assume some responsibilities which the overburdened interns find it necessary to delegate to her. Every day these nurses are going into other lines of work, not only in the nursing field but outside of the profession. Reasons given are many. First and foremost is low salary—$80, recently $85, per month is not an adequate living wage. True, some institutions offer $70 to $80 with complete maintenance, but many find institutional life unattractive at best.

It is difficult to bring back into general duty those nurses who have left the field. However, we should concentrate on how to make this type of service, which is gaining in importance, at least acceptable if not attractive, if we are to retain those already employed in the hospitals and encourage others to accept positions.

All those responsible for nursing care in institutions should obtain and study carefully "The Manual of the Essentials of Good Hospital Nursing Service," published by the American Hospital Association and the National League of Nursing Education, 1942, and the pamphlet, "Distribution of Nursing Service during War," published by the National Nursing Council for War Service. Both of these books represent careful study and contain much advice and information concerning personnel policies which, if heeded, should help to alleviate the shortage of nurses in our hospitals.

NEWS AND PERSONALS

The 93rd Annual Session of the American Medical Association held in Atlantic City, N. J., June 8–12, was very well attended by Washington physicians.

Dr. James E. Paullin of Atlanta, Ga., was elected President-elect of the Association, to take office in 1943. **Dr. Fred W. Rankin** of Lexington, Ky., assumed the office of President on June 10.

The House of Delegates conferred a distinguished service award upon **Dr. Ludwig Hektoen,** Chairman of the Advisory Committee of the National Cancer Institute, Washington, D. C. This award was made in recognition of his outstanding research on cancer.

NEW AUXILIARY PRESIDENT

MRS. A. MAGRUDER MacDONALD

President, Woman's Auxiliary to the Medical Society of the District of Columbia, 1942–1943

A number of Society members participated in the Scientific Program. The following papers were read before various Sectional meetings:

"The Prevention of Pulmonary Complications Following Thigh Amputations by High Ligation of the Femoral Vein," **Dr. J. Ross Veal**; "Epidemic of Encephalitis of 1941," **Dr. James P. Leake**; "Rehabilitation in Selective Service System," **Col. Leonard G. Rowntree**; "Resection of Kidney," **Dr. W. Calhoun Stirling,** and "A Preliminary Report of Biochemical Therapeusis in Carcinoma of the Prostate Gland," **Dr. William P. Herbst.**

Dr. Wallace M. Yater presided as Chairman of the Section on Experimental Medicine and Therapeutics, and delivered the Chairman's address entitled, "What's Wrong with Modern Therapeutics?"

Dr. William C. Woodward presided as Chairman of the Session on Legal Medicine.

Listed among discussants of scientific papers were **Drs. Harry H. Kerr, Ernest Sheppard, Benjamin Rones, J. W. Watts, and H. Ford Anderson.**

The Society was also well represented in the Scientific Exhibit, as the following list indicates:

"Treatment of Frostbite of the Extremities," **Drs. J. Ross Veal and Roy G. Klepser;** "Clinical Analysis of Blood Plasma," **Drs. Charles S. White, J. Lloyd Collins and Jacob J. Weinstein;** "Public Health in Latin America," **Dr. Hugh S. Cumming;** "Tumors of the Kidney," **Dr. Eugene R. Whitmore,** and "Treatment of Cardiospasm," **Dr. J. Russell Verbrycke, Jr.**

Drs. Veal and Klepser were awarded certificates of merit for their work in developing a new treatment for frostbite.

The medical work of Selective Service in all its aspects was exhibited by **Col. Leonard G. Rowntree and Major Robert A. Bier** of National Headquarters, Selective Service System.

Motion picture presentations were made by **Dr. Charles Stanley White** on "The Story of Plasma," and by **Dr. William J. Tobin** on "Parachute Injuries." **Dr. R. M. LeComte** was listed as one of the demonstrators who assisted the committee sponsoring a Special Exhibit on Backache.

The West Virginia State Medical Association announces that due to unexpected complications incident to World War II the place of meeting for their 75th annual meeting will be Huntington, W. Va., July 13–15, instead of White Sulphur Springs as previously announced.

The House Officers' Library at **Gallinger Hospital** will receive the new books which publishers send to the Medical Society after they have been reviewed in the MEDICAL ANNALS. The Executive Board voted favorably upon this suggestion of the Editorial Staff at its meeting, April 27. This library serves as a reference source for students of both medical schools as well as for the resident staff.

The Section on Pediatrics presented a symposium on "Constipation and Enuresis" at its meeting, April 23. Dr. Preston A. McLendon served as Chairman and the following physicians participated in the discussion: Drs. Joseph S. Wall, William S. Anderson, W. Dabney Jarman, Benjamin F. Dean and Rex E. Buxton.

A round table discussion on "Circumcision" was held, May 28. Participants were Drs. Joseph J. Mundell, Paul S. Putzki, William F. Burdick and Aaron Nimetz.

The following officers were elected for 1942–43:

Dr. Harry A. Spigel, *Chairman;* Dr. Lynn Colvin, *Vice Chairman;* Dr. Perry W. Gard, *Secretary;* Drs. James M. Moser and Margaret Nicholson, *members of the Executive Committee.*

George Washington University School of Medicine opened its 118th session, June 8. Rear Admiral Ross T. McIntire, who gave the opening address, was also the recipient of an honorary degree of Doctor of Science, conferred upon him by President Cloyd H. Marvin.

Dr. Walter A. Bloedorn, Dean of the School of Medicine, announced that new courses in military medicine and first aid have been added. Although 35 faculty members from the School of Medicine have been called into the armed services, the student enrollment of 78 freshmen represents an increase of 10 per cent over last year, Dr. Bloedorn reported.

Immediately following the opening session Dr. Bloedorn was host to speakers and faculty members at a luncheon at the Army and Navy Club.

New appointments to the **Commission on Mental Health** were made June 4 by Judges of the District Court in order to fill vacancies left by one resignation and two enlistments in the Navy. Dr. Miriam F. Dunn, who becomes the first woman named to the Commission, will take the place of Dr. Roger S. Cohen, who is in the military service. Dr. Dunn was formerly with the Henry Phipps Psychiatric Clinic at Johns Hopkins University. Dr. Isadore Rodis, Acting Director of the Psychiatric Department of the Georgetown University School of Medicine, will succeed Dr. Antoine Schneider, who resigned. Dr. Robert T. Morse, of the Chestnut Lodge Sanitarium, Rockville, Md., will serve the unfinished term of Dr. Elmer Klein, who is in the Navy. Reappointed to the Commission were Dr. Albert E. Marland, Dr. Hyman D. Shapiro, and

Mr. Thomas G. Walsh. Drs. Bernard S. French, Paul J. Ewerhardt and Walter Freeman are also members of the Board.

Dr. J. Winthrop Peabody was inducted into office as President of the American College of Chest Physicians at its annual meeting in Atlantic City, N. J., June 6. Dr. Peabody is President of the District Tuberculosis Association, a member of the Board of Directors of the National Tuberculosis Association, and Professor of Respiratory Diseases at Georgetown University.

Dr. Peabody was honored June 3 by the American Board of Internal Medicine when he was nominated guest examiner of candidates qualifying for certificates in the specialty of tuberculosis at Philadelphia General Hospital.

At a joint meeting of the American College of Chest Physicians and the American Broncho-Esophagological Association, June 8, Dr. Peabody discussed "Bronchoscopic Aids in Medical Conditions within the Chest."

Dr. Reginald H. Mitchell participated in the fifth annual exhibition of the American Physicians' Art Association held at Atlantic City, N. J., June 8–12. He exhibited two wood inlays, "The Crusader" and "Castle of Chillon," and a wood carving, "Six Whales." Dr. Mitchell was awarded a cup for his wood inlay, "The Crusader."

Major Robert A. Bier addressed the annual meeting of the American Academy of Pediatrics, Region 3, in Cleveland, May 14, on the subject, "The Physician (especially the Pediatrician) and the War in Relation to Selective Service."

Dr. James A. Cahill spoke before members of the surgical staff of U. S. Army General Hospital at Fort Meade, Md., May 28. He was the guest of Lt. Col. Daniel L. Borden, Chief of the Surgical Service.

Dr. Oscar B. Hunter gave the Secretary's report before the 43rd annual meeting of the American Therapeutic Society at Hotel Traymore, Atlantic City, N. J., June 5. On June 6, Dr. Lee Rice of San Antonio, Texas, and Dr. Hunter presented a paper on "Some Unusual Cases of Leukemia."

Dr. Roscoe W. Hall, President of the American Psychopathological Association, opened the 32nd annual meeting of the Association at Hotel Statler, Boston, May 17. **Dr. Alexander Simon**, in collaboration with Margaret Hagan, Field Director of the American Red Cross, contributed a paper on "Social Data in Psychiatric Casualties in the Armed Services." As **Dr. J. L. Hoffman**, Senior Medical Officer of St. Elizabeths Hospital, had been ordered to report for active military duty May 18, his paper entitled, "Psychotic Visitors to Government Offices in Washington, D. C.," was read by Dr. Simon.

Dr. J. R. B. Hutchinson was elected a member of the Board of Governors of the American Life Medical Section at Colorado Springs, Colo., June 6.

Dr. W. Sinclair Bowen addressed the graduating nurses of Garfield Memorial Hospital at their baccalaureate services, May 31, at the Ascension Episcopal Church.

Dr. William Earl Clark was elected Vice President, representing the School of Medicine, of the General Alumni Association of George Washington University at its annual meeting, June 1.

Dr. J. Winthrop Peabody addressed the 23rd annual session of the Association of Former Internes of Freedmen's Hospital, June 2. His paper was entitled, "Early Diagnosis of Tuberculosis."

The District Social Hygiene Society reëlected Dr. H. H. Hazen as President at its annual meeting, May 8. New Board members to serve during 1942–45 include Drs. Hazen, George W. Creswell, Elizabeth Kittredge, Ella Oppenheimer, R. A. Vonderlehr, and Major General Merritte W. Ireland, retired. Dr. Ralph G. Beachley will serve as Board member during the 1942–44 term.

The regular Sunday conference of the medical staff of **Children's Hospital**, May 3, was attended by a number of delegates to the Eighth Pan American Child Health Congress. Cases of interest were presented and discussed in both English and Spanish. Among the guests were Dr. Clifford G. Grulee, Secretary and Treasurer of the American Academy of Pediatrics; Dr. Frederick William Schultz, Professor of Pediatrics at the University of Chicago; Dr. W. Ambrose McGee, Richmond, Va.; Dr. Ethel Dunham and Dr. Martha Elliott of the Children's Bureau, and Dr. Fred L. Adair, Chicago, Ill.

The attention of the Editors has been called to an error which appeared in the June issue of the MEDICAL ANNALS, page 245. **Dr. Chevalier L. Jackson,** Editor-in-Chief of the Quarterly Review of Otorhinolaryngology, was incorrectly referred to as an Honorary Member of the Medical Society. His father, Dr. Chevalier Jackson, was so honored by the Society in 1932.

CORRESPONDENCE

WASHINGTON, D. C., May 21, 1942

MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA
1718 M STREET, N. W.
WASHINGTON, D. C.

ATTENTION: MR. WIPRUD, SECRETARY

GENTLEMEN:

Please accept my sincere appreciation for the kindness you extended to the Selective Service System of the District of Columbia in permitting the use of your Auditorium for our general meeting last week.

I assure you we are not only grateful but very appreciative, and your action in this regard is but another indication of that fine spirit of coöperation which the Society has always shown Selective Service.

I am,

Very truly yours,
WILLIAM E. LEAHY
D. C. Director, Selective Service System

ALFRED RICHARDS, M.D.

(1872–1942)

Dr. Alfred Richards, surgeon, an Active Member of the Medical Society of the District of Columbia, died May 26 at Providence Hospital following a long illness. He resided at 400 Seward Square, S. E.

Dr. Richards, a lifetime resident of Washington, D. C., was born September 29, 1872. He received his degree in medicine from Georgetown University in 1897 and was licensed to practice in the District the same year. For a time he was a member of the faculty of Georgetown University School of Medicine. He also served as Police and Fire Surgeon. He was an Army surgeon in the Spanish-American War and a member of the District Draft Board in World War I.

Dr. Richards became affiliated with both the Medical Association of the District of Columbia and the Medical Society in 1904. He was a Fellow of the American Medical Association and a member of the Association of Military Surgeons.

Surviving are his sister, Mrs. Percival Padgett of Bethesda, Md., and three brothers, Charles Richards of Cleveland, and Joseph and Arthur Richards of Washington, D. C.

(*Continued from page 260*)

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(*Continued from page 268*)

the blood stream. The infecting organisms were not the common anaerobic organisms such as Clostridium welchii, Vibrion septique, or Clostridium oedematiens, but rather an aerobic Gram negative organism commonly found in the soil and in the intestines. These organisms were positively identified as Aerobacter aerogenes and Bacillus cereus. This patient's condition was not aided by the sulfa drugs and they have not been shown to have any effect on these two organisms.

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1942–1943

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MEDICAL ANNALS
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DISTRICT OF COLUMBIA

VOLUME XI August, 1942 NUMBER 8

"BLITZ" PSYCHOTHERAPY*

BEN KARPMAN, M.D.
Washington

As COMPARED with strictly physical illnesses, mental diseases are more deep-seated, the incubation period running into months and years rather than days and weeks. The etiology is more obscure and the search for it, therefore, more difficult, while the therapy takes up a great deal more time and energy that often tax the best efforts of the physician. Hence, physicians engaged in active psychotherapy must forever be on the alert for any method that will lead toward a more rapid amelioration of the symptoms. It is necessary to devise such means not only because long treatment is beyond the means of the average patient, but because the longer the treatment takes, the longer the disease continues, with more suffering for the patient. And let us not make a mistake about it, psychic suffering is much greater than physical suffering.

I am very well aware, of course, that from time to time treatments are offered which are supposed to circumvent these difficulties. There is a school of psychiatry, or more correctly pseudo-psychiatry, unfortunately still having a large number of adherents, which attempts to treat all functional nervous disturbances by physical means. I know physicians who have a ready formula for all cases. Either the patient gets a sedative or a stimulant depending upon whether he gives the impression of being depressed or excited, regardless of the actual symptomatology. In the nature of things such treatment must fail, although occasionally it may secure apparent results, which, however, are due more to the confidence the patient has in the doctor or in the medicine than to the treatment offered. Only a few weeks ago there appeared an article in the *Journal of the American Medical Association* in which the curability of a certain remedy for asthma was traced to purely psychogenic effects. There is another group of physicians who attempt to reach the pathology of nervous disorders by the use of so-called suggestion and persuasive influences. They pat the patient on the shoulder, tell him that the illness is imaginary and ask the patient to try to "snap out of it." It is hard to believe, but it is true, that I have known "psychiatrists" who have tried to cure alcoholics by urging them to give up their drinking and exacting a word of honor that they would do so. Needless to say, if the alcoholic could keep such a promise he would not have to go to a psychiatrist. All these cures last only as long (and often not as long) as the influence of the physician lasts and disappear when the patient or the doctor stays away. Above all, such treatment gives the patient a false sense of security and hope, while the disease makes further and serious inroads.

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* Read before the Section on Neurology and Psychiatry of the Society, March 5, 1942. The word "blitz" is used here in the moderate sense, meaning relatively quicker therapy. Owing to severe lack of time and space, the cases presented herewith are given in the merest abstract. Their complete presentation will be published later.

It is therefore obligatory on the part of the practicing psychiatrist to look for more rapid methods that are both scientifically sound and clinically correct in so far as they attempt to reach the etiology of the condition, understand its pathology, and on the basis of the two offer appropriate treatment.

In the present state of our knowledge such treatment calls mainly for psychoanalysis and the varieties of psychotherapy that have been influenced by it. There are some who do not accept psychoanalysis in the entirety but are willing to accept some of its tenets. Psychoanalysis as ordinarily practiced is a protracted method. Hence even those that practice psychoanalysis in any form must look for opportunity to devisemethods within the psychoanalytic field that will lessen the duration of the treatment. For some years I have used the so-called active treatment in psychoanalysis, which means that I constantly intrude into the associations of the patient and work with him actively toward unraveling his problem. Through such active treatment it is possible to cure some patients in 125 to 135 sessions, whereas with the ordinary technic it would probably have taken 225 sessions or more. In some cases good results can be accomplished even in 75 sessions. But even that is not enough curtailment of time. Patients are growing in number and one must therefore forever look for a still more active approach.

In the course of some 20 years of experience with psychotherapy, I have been obliged to devise a number of methods which attempt to circumvent the difficulties. Of these, I shall cite here two. Needless to say, these are applicable only to certain types of neuroses and psychoses and not applicable to other. Owing to the limitations of time I shall cite the cases in the briefest form only, reserving for a later opportunity the citation of the larger and more intimate details and mechanisms.

The First Method

The first of these methods, which for lack of better term I call "objective" psychotherapy, departs from the traditional analytic technic in that it avoids placing the patient on the couch. Instead, the patient is asked preliminarily to write out his life in his own words after being given appropriate instructions. On the basis of this history questions are made out. He is seen several times a week, and every time he is given a question to answer before the next visit. When the answers to the first set of questions have been completed, the whole thing is summarized for the patient in the form of a written memorandum. Further questions are made up on the basis of material thus obtained. Thus we move along for about 6 or 8 months. In the course of time the patient is also given some books to read and comment upon. They deal with psychodynamics and psychotherapy. Throughout, brief talks are held with the patient in which the meaning of the material brought to the surface is explained to him. The method has the advantage in that it consumes much less time, is more objective and therefore more scientific; also, it gives the patient just enough insight to handle his life problems, whereas an excessive amount of insight is often harmful. I shall cite now an instance of a case thus treated and cured.

Illustrative Case

The patient, S. A. D., a young naval officer, was admitted several years ago in a state of abject depression. He felt himself wholly inefficient and inadequate to meet his duties, worrying that he could not keep up with things and finally coming to the conclusion that it was hopeless and he would never be any good any more; he entertained some vague suicidal ideas. Because there seemed to be some situational factors at work, difficulties with officers, and a broken engagement, the case was diagnosed as one of reactive depression. He was discharged from the hospital as recovered 8 months after he was accepted for psychotherapy. The insight received through the treatment has helped him to make an entirely satisfactory adjustment and there has been no recurrence. It should be noted that cases of this type often recover spontaneously but suffer relapses and recurrences because of lack of insight.

The immediate history revealed that for the year previous to the hospitalization he had been working under the burdensome tension of a heavy strain which appeared to have come from different sources and colored all his working and thinking. It soon became apparent, however, that this factor of strain lay much deeper and that the external situations, for all their prominence as immediate precipitating factors, could not explain the depression. Indeed, rather than being the cause of the depression, it turned out that they were in themselves results of the same. That is to say, had there not been developing a depression from the more deeply lying sources, the immediate environmental situations in question could not have been so acutely felt nor have accentuated the oncoming breakdown. To understand this, it is necessary to turn the history counterclockwise and begin with his birth and early environmental influences which step by step have led through years of accumulated difficulties to unbearable strain and tension and finally to the depression.

The patient was the only, and therefore much spoiled, child in a family where the parents were incompatible, always at odds, the home atmosphere being charged heavily with discord, strain and tension. Both parents were stubborn and unbending, the boy being used by both as a buffer; and this, of necessity, because of divided allegiance, rendered the child emotionally unstable. The father was very lenient with the boy, spoiling him with gifts and doing things for him that the boy should have done himself. This overindulgence unfortunately led to the development in the boy of lack of self-confidence and emotional dependence, and through years of association he had come to depend upon his father and to fall back on him in cases of even minor emergencies. On her part the mother, partly to counteract the influence of the father, partly to assuage her feelings of neglect and missed love, had undertaken the complete training and supervision of the boy, which led to overdiscipline and overprotection. She was the driving force in the family, doing and arranging things for the son; and although the boy normally rebelled, the rebellion did little good, and the mother's attitude only tended to foster dependence and defeat self-reliance. This joining forces and synergizing with the attitude he had developed from his father, produced strong feelings of inferiority which followed him through life, contributing to the strain under which he was living and eventually leading to the breakdown.

Withal, there were compensatory features. There was no doubt that both parents loved him, and out of this, through numerous incidents in the family life, there developed biparental fixation that was rather typical of the Oedipus-complex. The home was typically middle class and highly puritanical, and the problem of sex was a much prohibited, even unmentionable topic. In the course of normal human events, the boy was once led to cryptic experiments in sexuality with a boy cousin of his, the experiment consisting in an attempted trial at fellatio. At this first trial the boys were surprised by their parents and this brought a most severe scolding of the "fire-hell-brimstone" type and threat that future repetition of such behavior might lead to the direst of consequences. Although this scolding was not accompanied by any physical chastisement, it profoundly affected the boy to a point that homosexuality was completely repressed and never allowed to come to the surface again; however, as will be noted later, it reappeared in a disguised and sublimated form during his early adulthood. Additionally, it made him think that he was a very, very wicked boy, an idea that accentuated the already existing feelings of inferiority and contributed to the development of a strong sense of guilt.

As part of the training or lack of training in sex, the boy developed the idea that one must never play with girls; women were an ideal that could not be polluted by sordid reality. With normal heterosexual development thus blocked and homosexuality completely outlawed, it is not surprising that the boy was led early into solitary masturbation. Because such activity was also terribly prohibited and because the accompanying phantasies were often incestuous in nature, the indulgence enhanced greatly the sense of guilt which originally developed as a result of the homosexual episode. This sense of guilt, coming now as it did from several sources, in turn led to feelings of inferiority, which adding themselves to the previously existing inferiority state, became the most conspicuous characteristic in the patient's personality and contributed so strikingly to development of strain and later to the breakdown.

As he was growing into manhood, matters did not improve, but indeed became worse, because he was now in college, and reality was demanding a different, more adult adjustment. And this he, a young man with the emotions of a child, could not make. During his first year of college his father died, and this was a tremendous shock to him. It is highly suggestive that shortly after he took in as a roommate, and became very much attached to, a young man whom he fairly worshipped. The material available leaves no doubt as to this deep admiration being but expression of an unconscious homosexual love. The friendship lasted throughout the rest of their college life, and during this period sex was no great problem to our patient. After graduation he had a few affairs with girls, but could never decide upon marriage, strong feelings of inferiority, inadequacy and guilt preventing him from making a decision. The same feelings of inferiority and inadequacy began to have their effects on his work. He became more and more inefficient, was unable to stand criticism, became irritable and depressed, and finally had to be hospitalized.

Review of the case.—We are impressed here with several points of importance. One is, that although difficulties at work and the conflict created by the broken engagement conceivably contributed to the breakdown, they were unimportant in themselves, the man heading toward a breakdown by reason of conditions long preexisting. The second point to be noted is that the hereditary background seems to be entirely clear and was not a factor in the developing neurosis. Third, the constitutional aspects do not appear to be very prominent. It is true he had enuresis, but it ceased with puberty as it does with thousands of other children. He outgrew the usual childhood illnesses. It is suggestive that the main psychosomatic manifestation in his breakdown was an upset stomach and loss of appetite, an echo of his earlier illness. When a neurotic takes sick and needs to express his illness psychosomatically, he often falls back on actual illnesses he had in earlier years. Fourth, the insight he received through psychotherapy allowed him to gain an emotional balance and personality integrity which he did not have before. He has overcome his lifelong inferiorities and fears, in particular the fear of marriage. He is now married and so far is well adjusted. And this is about as much as we can expect of anyone.

It is my policy to keep in touch with my discharged patients. Permit me here to quote with a certain amount of justifiable pride extracts from this patient's last letter. "The future looks perfect to me . . . Maybe I am bragging, Doctor, but I think I am an A1 graduate of yours. I am such a promising chap now that I often wonder if it is really me. My best wishes to you and may all your cases benefit as much as I did."

THE SECOND METHOD

The second method is one that I call "mediate" psychotherapy and is used only in those cases in which the patient refuses to coöperate and therefore cannot be treated directly. Instead, the coöperation of his mate, wife or husband, as the case may be, is secured and the same method is applied as in the first type, that is, having the mate get from the patient all the information available which qualitatively goes beyond the ordinary anamnesis. In the nature of things such approach is much more limited, but on occasions enough is learned of the emotional life of the patient to enable the psychiatrist and the normal mate to so manipulate his life as to effect a more healthy adjustment. I shall cite one case so treated. It is now close to 7 years since the patient has been discharged. The wife states that their adjustment is excellent and there is not even a suggestion of recurrence. In one of her letters she stated that her husband made a brilliant recovery which to her was nothing less than a miracle, remembering the "terrible" shape he was in at the time of the breakdown. The case is of a type diagnostically known as an acute homosexual panic.

ILLUSTRATIVE CASE

The case concerns an adult white male, L. D., aged 34, married, an engineer by profession, who, in May 1934, became depressed and unable to sleep, worrying about his work and the financial condition of his family. He developed a change in personality, became introverted, talked to himself, was tense, had ideas of reference, gave evidence of a maladjusted marital sex life (impotence) as well as expressing abnormal sex trends (saying that he was a woman and taking his wife's place; accusing himself, his boy and his father of being "perverts," of becoming homosexual, etc.) and somatic delusions (his "testicles were gone"), all this accompanied by strong feelings of guilt.

By July 31, 1934, when admitted to a university hospital he was practically in a delirious state, confused, irritable, disconcerted and talking constantly in an incoherent manner. By August 15, 1934, he recovered from this condition and was discharged from the hospital but was definitely projective, utterly lacking in confidence, remorseful over some marital infidelities, and expressing suicidal trends. He became agitated, rambling in conversation, and had hallucinations in the auditory field. and 2 weeks later it was necessary to send him to St, Elizabeths Hospital.

Upon admission to the hospital he was non-coöperative and confused, and his face expressed worried perplexity.

He was tense and demanding, emotionally unstable, distressed and agitated, restless and disturbed, had numerous psychosomatic complaints, cried and moaned, was actively hallucinated in the auditory and visual fields, responding to voices of a derogatory nature. He had vague feelings of depersonalization. For a short period he seemed to improve, then again became violent. At one time he attempted suicide by butting his head against a wall. At this time the patient's wife, becoming terrified at the prospect of losing her husband as a "demented" patient in a psychiatric institution, began to demand in no uncertain terms that something more be done for the patient than mere custodial care. She threatened to report the ward physician to the superintendent for lack of interest and inactivity in the case and said that she was going to secure psychoanalytic help from the outside if the hospital was deficient in providing this kind of treatment. The ward physician regarded this case as one of poor prognosis and not worthy of therapeutic risk, but under pressure from the patient's wife turned the case over to me with the statement, "This is a bad case, but the woman is demanding and threatening and so I am 'passing the buck' to you." The physical examination as well as all laboratory examinations were essentially negative.

As in so many other cases of this type the beginnings of the man's problems go back to his childhood, in particular the family situation, but we do not know much about it until we get to his more recent life. We find suppressed resentment against his parents coupled with extreme emotional dependence upon them. The home atmosphere had always been quarrelsome, uncongenial, and filled with tension. The resentment and tension were increased after his marriage, and the conflict was heightened. This is posed against a background of overwork extending through at least 6 years, during which time the patient was employed by day and went to preparatory school and to the university in the evening. Part of this time he was employed by his father, whose exacting and unkind attitude served to increase the suppressed resentment that warred with filial affection.

The patient does not appear to have ever had a position which was free from difficulties. While some of this difficulty may have arisen from his own excitable and egotistic makeup, there seems to be ample evidence that a good deal of it was real, the result of political interference, group antagonisms, etc., which served as immediate precipitating factors. I do not believe that the patient's mental disturbance can be traced to one definite cause, but rather that it resulted from a combination of causes which, taken together, proved too great a weight for his neurotic constitution.

The solicitation by his father and the quarrel with his brother appear to have constituted "the straw that broke the camel's back." The ensuing breakdown would seem to be like the bursting of a storm that has been brewing for years. The patient collapsed under the insupportable weight of too much open and secret worry, some of it legitimate enough and some of it dictated by unconscious psychologic complexes.

However, allowing in full for the role of external factors, the development of the psychosis proper was, of course, made possible only by the presence of a large number of unresolved emotional conflicts which provided the material background for the psychosis and the mental content. The hallucinatory content during hospitalization seems in part to be a repetition of thoughts about which he had worried for a long time, many of them occasioned by remarks made by his mother, but for the most part arising from suppressed homosexual and related paraphiliac ideas or impulses, which exceed the comparatively conventional admissions made to his wife. Specifically, these relate to his early development and the peculiar family setting in which he was brought up. A striking characteristic about our patient is that he presents such a perfect picture of a family slave deeply involved emotionally with every member of the family, father, mother, deceased sister and living brother. He was emotionally tied up to father and mother, and sexual ideas about both appeared in the mental content of his psychosis. Most of the patient's unconscious attitude toward his mother is gleaned from the acute stages of the psychosis. He stated that he was now impotent, that he could love his mother and wife equally well, "only to be lip love." He spoke of sexual practices that occurred, of sucking, and such. The incestuous attachment is clearly evident here as is also the fact that he was in acute conflict with divided affection and loyalty between mother and wife. It is difficult to explain here otherwise the idea of voices telling him of his divorce from his wife. It should be noted that his mother strongly objected to his marriage and that after he married his present wife his mother was persistently nagging and threatening to disown him. The patient was thrown into acute conflict in choosing between wife and mother. Unable to solve the problem one way or another he escaped via psychosis. That there is far more of an unconscious homosexual and paraphiliac component in the picture than could be attested by actual evidence is reasonably apparent from the persistence for some time of hallucinatory reactions that suggest such a basis. His secret jealousy of a Mr. Sebastian, who was his closest friend, sounds like a paranoid projection of unconscious homosexual attachment. What his sexual behavior really was when he was away from his home we shall never know, but the fact that following his breakdown many of his utterances were strongly tinged with paraphilias is certainly suggestive of a stronger background than mere reading in a clubroom about sexual irregularities. The persistent memory of seeing at the psychopathic hospital naked men dancing and similar statements and implicit behavior certainly tend to support the idea of the projection of guilt feelings which were based not necessarily only upon homosexual behavior as such but upon some kind of perverted sexual behavior as well.

The panic reaction was an expression of an acute sense of guilt arising from the impossibility of adequately solving two conflicting mutually exclusive sexual trends. The secret wish that the conflict be resolved in favor of the prohibited antisocial trend creates a fear of the consequences to be followed, and it was the combination of wish and fear, one craved but unrealizable, the other threatening and dreaded, that threw the patient into a panic. In the course of the treatment, the wife was able to gain an ascendancy in the transference, thus moving the husband toward the more practical and socially more acceptable goal. This made the incest situation more remote. As the possibility of realizing one of these trends (the incestuous) was removed, the patient was enabled to make an adjustment at a normal social level and thus recover. While he still harbors in him dangerous potentialities, the insight gained by his wife into his emotional life enabled her to so arrange their life that there has not been even a suggestion of recurrence after nearly 7 years.

SUMMARY AND CONCLUSIONS

1. Utilizing psychoanalytic insight, but omitting the conventional technic, two psychotherapeutic approaches are offered as less time-consuming, besides being more objective.

2. The first method consists in having the patient answer in writing a series of questions based on a history prepared by himself. This provides one with a detailed anamnestic background. Further questioning attempts to elicit more deeply buried material. This repeated questioning is continued until sufficient insight is gained into the mechanisms of the reaction.

3. A case of reactive depression treated by this method has been presented. The psychogenesis was traced to biparental fixation with incestuous phantasies concerning the same and strong feelings of inferiority which became associated with feelings of guilt, all leading to strain and tension and finally resulting in a breakdown. The insight gained through the treatment enabled the patient to make an entirely satisfactory adjustment.

4. Another method is that of "mediate" psychotherapy used in cases in which the patient himself refuses to coöperate and the entire work is done through the medium of the mate who under the guidance of the psychotherapist gets the desired information from the patient. On the basis of such information the psychotherapist helps the mate to so arrange their emotional life as to avoid the weak points and danger spots.

A case of an acute homosexual panic has been cited, and it has been shown that the insight gained by the patient's wife into his emotional life helped her to arrange their marital life on a superior level. Nearly 7 years have passed and there has been no recurrence.

5. In conclusion, it is submitted that the utilization of such objective analytic psychotherapy may help us to reach a group of patients not ordinarily reached by the conventional technic, that it is less time-consuming and therefore less expensive to the patient, and that it is more objective since there is here less intrusion of the personality of the psychoanalyst into the therapeutic situation.

THE RESPONSIBILITY OF THE HOSPITAL OBSTETRIC STAFF CONFERENCE IN MATERNAL WELFARE*

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SEVERAL factors have been responsible for the progressive increase in hospitalization of maternity patients in recent years. In the first place, the present tempo of American life has made people more hospital-conscious. This is true in rural as well as in urban communities. Second, the public has become increasingly interested in health matters. As a consequence they have learned that the safest place for a mother to be delivered of her baby is the hospital.

While safety may be the deciding factor in many instances, the convenience of a hospital delivery is greatly appreciated both by the patient and the physician. Every well equipped maternity pavilion provides means of protecting the life and health of the patient and of promoting her comfort and happiness. It supplies special equipment for adequate care of the newborn baby. It offers medical, nursing and other personnel sufficient for the proper handling of the normal case or for any emergency that might arise. Finally, hospital insurance has tended to increase the number of hospital deliveries in some localities. These maternity benefits have helped many prospective mothers to secure hospital care at the time of delivery who might otherwise have remained at home.

Increased hospitalization of maternity patients has reached some degree of exigency as shown by the concern evidenced recently by one interested governmental agency in sending out a circular letter and questionnaire to obtain data on the subject. There is a direct relationship between this situation and the question under discussion this evening, namely, maternal mortality. It has a direct bearing on the safety of the pregnant or parturient woman and her offspring. Some questions that arise in this connection are, "Are we providing additional safety factors in our now well filled maternities? Are we constantly on guard against the hazards that such a condition may produce, such as laxness, incompetence and overcrowding?" These dangers are possible unfortunately with the increase of courtesy staff men of limited experience; with more visitor contacts who are potentially infectious; and with overcrowding in both maternity and nursery sections. The final insecurity, at least as I see it, is the present dislocation of nurse and intern assistance due to the demands of the military emergency.

Fortunately, there is or should be a local organization in each hospital which can help to solve our local obstetric problems, in spite of an increase of patients and a decrease of assistance. I refer to the Hospital Obstetric Staff Conference. This organization, in my opinion, holds the answer for reducing maternal mortality and morbidity, for decreasing fetal and neonatal mortalities, and for meeting the problems of prematurity. I make this statement with an assurance born of considerable experience in such work.

In attempting to promote maternal and fetal welfare an analysis of maternal mortality has been conducted in Philadelphia for the past eleven years, and for four years all fetal and neonatal deaths have been reviewed. Open discussion at the monthly meetings of the Maternal Welfare Committee has crystallized our thinking so that broad general lines of attack can be made on evident problems. Very early in these studies the practice of administering pituitary extract in labor was condemned so thoroughly that today this drug is almost never used before delivery. The indiscriminate use of barbiturates and the paradox of operative delivery to terminate labor thus artificially lengthened and its resulting shock was openly ridiculed. Slowly, but surely, the operative treatment of septic abortion was rejected. The use of the sulfonamides was subjected to critical analysis. Blood banks were instituted in many hospitals as a result of constant criticism of delay in transfusing women who died of hemorrhage.

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* Read before the Society, April 15, 1942.

Besides these general improvements in hospital practice, four sets of regulations were recommended and adopted. The first, containing augmented regulations for maternity divisions, was based upon the standards of approval for hospitals taking obstetric patients as proposed by the American College of Surgeons in the "Manual of Hospital Standardization," and the "Manual of Obstetric Practice in Hospitals" of the American Hospital Association. This emphasized the need for limitation of operative obstetrics by inexperienced or untrained men, and for consultations in cases of dystocia and abnormal labor. The second referred to obligatory admission of patients with signs of toxemia of pregnancy. It set forth clearly the signs and symptoms that necessitated admission of a toxemic patient. The third contained suggestions directed toward diminishing deaths due to septic embolus. Since most of the deaths occurred immediately after the patient had been permitted to get out of bed after a septic puerperium, the guide suggested for allowing such patients to get up was an absence of continued infection as shown by such tests as complete blood counts, sedimentation rates, and negative pelvic findings. The final recommendation made it obligatory for hospital obstetric staffs to decide the question of theoretic avoidability in every maternal death.

May I digress for a minute to say that the decision of the hospital obstetric staff was not necessarily accepted by the analysis committee. Differences of opinion were frequently expressed in no uncertain terms by members of the committee.

This obligation of deciding the theoretic responsibility in each case required open discussion by the group most intimately connected with the case. This included details of prenatal care, technic of delivery, and proper puerperal therapy. In staff conference meetings which I have attended in my own hospitals and others, no errors of omission or commission have been overlooked. Disregard of standing orders was queried, accuracy of judgment was questioned, errors in technic were discussed. Local problems were discovered and remedies were effected. Members of the junior and courtesy staffs who were reluctant to discuss cases at the Maternal Welfare Meeting of the County Medical Society had no such inhibitions in their own local groups. Here they felt free to express their ideas frankly and freely. As a consequence there was just criticism of obstetric conduct in the hospital which resulted in improvement of maternity practice.

In addition to the discussion of mortality it has been found fitting to review the morbidity, whether febrile or not, including such conditions as hemorrhage, toxemia and complete tear, as well as the incidence and type of operative work. This is the program of the average conference with which I am most familiar. Such intensive study of our mistakes and misfortunes and our management of emergencies has, in my opinion, been followed by the development of an "obstetric conscience" collectively and individually. It has made us more alert to the problems involved in a rising birth rate and a sharply increasing hospitalization of maternity cases.

These periodic analyses of maternal mortality and morbidity and reviews of work which are made by the hospital obstetric staff members lead to a definite plan for solution of the problems involved. Invariably, some inconvenience or expense is incurred, but this is more than offset by the possible saving of lives.

Puerperal infection is always a possible danger in maternities, but it can be reduced considerably through free discussion at the obstetric staff conference. Minimizing contacts in the puerperal period is a valuable aid. In this connection we must disregard the objections raised by the patient or her family to limited or restricted visiting hours. It is noteworthy that this point has been included in the Sanitary Code of New York City. Philadelphia has also recommended this through the Department of Public Health. Again the degree of asepsis in labor and delivery rooms cannot be overemphasized. A delivery should be safeguarded by using the same surgical technic as for a laparotomy. Droplet infection should be avoided by strict adherence to the use of proper masks, caps and gowns for all attendants.

Trauma and shock are conditions for which the obstetric staff should feel responsible. Two important factors in their prevention are: first, consultation for a patient who has been in labor 24 hours, and second, limiting of men without special obstetric training to normal deliveries and the use of perineal forceps. A review by the obstetric conference of the indications for operations effects a check on the incidence of interference. Again, the availability of prompt treatment is a matter of staff concern. Then, too, an analysis of stillbirths and neonatal mortality often discloses errors of judgment and technic in delivery which fortunately may have had no serious effect on the mother.

The increase in the percentage of deaths from hemorrhage in the yearly puerperal deaths in Philadelphia from 9.1 in 1931 to 11.3 in 1940 makes me feel that our efforts to control this situation are not yet sufficiently effective.

Toxemia is a joint medical and obstetric problem demanding constant staff conference attention. Many of our toxemia deaths are blamed upon the patient's neglect of symptoms. To some degree this can be ameliorated by lay education in mothers' classes. Standing orders in the clinic stating the criteria upon which a presumably toxemic patient must be referred to the hospital will allow time for study and treatment. The use of such a rule in ward patients will be followed early by its adoption in private practice of both attending and courtesy staff. Rational study procedures, medical and ophthalmologic consultations, and consideration of indications for terminating pregnancy should be flexibly standardized as also should therapy for emergency convulsive cases.

The difficult question as to whether or not fetal life must be sacrificed by termination of pregnancy should be fearlessly handled and have staff backing. The lowered resistance of the toxemic woman to infection, hemorrhage and shock should be a matter of staff concern in the operative treatment of such patients.

Organization of the staff for the treatment of any emergency is a necessity. Teamwork should be encouraged and definite duties assigned. Provision should be made for replacement of fluids. Every hospital should have a blood or plasma bank for use immediately in case of hemorrhage. Those responsible for such a bank should know that these aids are in stock and apparatus in working order. A short delay often spells the difference between recovery and death.

The obstetric staff has the responsibility of training men to become competent in obstetric surgery. This is an individual problem in each hospital and cannot be neglected. Personally, I do not believe a chief fulfills his duties unless he is constantly trying to fit a younger man to replace him.

Finally, the matter of lay education is most important. I am convinced of the need for

(*Continued on page 330*)

TREATMENT OF CONDITIONS CAUSING FREQUENCY AND DYSURIA IN THE FEMALE*

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TONIGHT I am going to talk about a group of conditions which are very frequently a problem for the gynecologist. These entities are ureteritis, cystitis and urethritis.

The etiology of these entities is rather interesting and includes any of the following: the usual foci consisting of infections of the teeth, tonsils and sinuses, intestinal tract disturbances, boils, carbuncles, and many acute infectious conditions at any time. The close relationship of the lower urinary tract to the pelvic organs and the rectum is very important from the practical consideration. The microörganisms that are associated with these conditions are the streptococci, the staphylococci and the colon bacillus, as well as a preponderance of the coccus type of organisms.

The severity of the symptoms does not necessarily parallel the severity nor the extensiveness of the lesion. To begin with, so far as the urethritis is concerned, there are really very few women who do not have some degree of urethritis, either of a mild granular type or of the chronic cicatricial type. The bladder is not infrequently the seat of a fairly well disseminated areolar cystitis. When a cystitis involves the muscular coat it is rather seldom that there are not severe symptoms. Involvement of the lower end of the ureter with a ureteritis is variable so far as the symptomatology is concerned, just like the process in the bladder and urethra.

The main symptoms which characterize all these lesions are frequency and dysuria, the latter often occurring at the end of urination. Sometimes these symptoms get so severe that the patient actually has to live in the lavatory, because no sooner does she get through voiding than she still has another desire to void with expulsion of only a few drops more at a time. A symptomatology such as this is about as bad as anything I know of, and certainly the patient's life is a "hell on earth."

The diagnosis consists of a rather careful observation of the urethral meatus itself, palpation along the course of the urethra, and palpation of the bladder base as high up alongside the bladder as can be reached with the finger in the vagina. This simple procedure is very valuable because there is no question about the sensitiveness of the tissues as one palpates them. A purulent discharge coming from the vagina naturally is of significance, and inspection of the cervix will show whether there is inflammation or infection in the cervix. The anus should also be carefully observed and it should be determined if there is a painful fissure or possibly a painful crypt within the sphincter of the anus. These rectal conditions very frequently are associated with lower urinary tract lesions, not only from the standpoint of the focus of infection but from hyperirritability of the reflex arc which controls the micturition reflex. A painful fissure of the rectum very frequently is the cause of frequency and dysuria.

The urinalysis may or may not be significant, because very frequently the urine is entirely normal with the exception of the bacteria in it. In most instances in which these lesions occur one will find, if he takes the trouble to make a cultural examination of the urine, one of the several organisms already noted. It is possible, however, to have these lesions with a sterile culture. There may be pus in the urine, which, of course, calls for a thorough urologic investigation. A flat plate of the urinary tract should always be made as a routine part of the investigation because on rare occasions calculi are present which might be missed otherwise.

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* Discussion of Dr. I. C. Rubin's paper, "Office Gynecology," at Postgraduate Course in Office Surgical Procedures and Psychoneuroses, held at the Society's building, March 24, 1941.

Upon cyctoscopy the urethritis is definitely recognized both by the tenderness of the urethra to instrumentation and also by the direct observation of the mucosa of the urethra itself. For observing this urethral mucosa a direct cystoscope, of course, is by all odds the best. Upon observing the surface of the bladder without much distention one may miss the presence of panmural cystitis, but when the bladder is distended these areas of panmural cystitis are seen to manifest themselves by the appearance of petechial hemorrhages which may actually produce free oozing. These lesions may be single or multiple, and they may be of various sizes. Sometimes it is possible to recognize an unusually sensitive area of the bladder by touching the bladder wall with the beak of the cystoscope, when this maneuver definitely produces a severe pain reaction on the part of the patient.

When it comes to making a diagnosis of ureteritis, one may be baffled. One has to interpret the pain produced by the passage of the catheter through the lower ureter and to interpret the urograms, whether they be intravenous or retrograde, from the standpoint of visualization of localized areas of spasm in the lower ureter. This reaction on the part of the ureter is similar in practically all respects to the localized spasms that are seen in the region of the stomach and bowel when there are lesions which are pathologically identical. When, upon urethral dilation there is relief from the symptom, that fact is also contributory in helping to make the diagnosis.

Unfortunately, from a standpoint of diagnostic accuracy, many of these lower ureteral inflammatory lesions are called ureteral strictures, and the fact that dilation of the ureter relieves the patient also contributes to the frequency of this error.

It is not at all uncommon to have either one, or two, or all three of these entities in the same patient. They are all in the group of chronic, infectious, inflammatory tissue lesions which have all degrees of either chronicity, subacuteness, or acuteness. The pathology of these lesions consists of the usual signs of inflammation which goes along with infection of any kind.

When these lesions have persisted for a long time there is considerable cicatrization in them. This is particularly true in the urethra, and we see many senile urethras that are very small in caliber as a direct result of a long-continuing, chronic, low-grade urethritis which sometimes for a period of years is not even productive of symptoms.

The treatment of these lesions is usually very satisfactory and in recent years has been greatly augmented with the advent of our new chemotherapeutic and endocrine agents. The first objective of treatment should be the eradication of any and all foci which may have any relationship to the condition, since naturally it would be fruitless to treat the local condition with any degree of success if the focus which was feeding it were allowed to continue. Water should be given in liberal amounts so that the urine will be dilute. The pH of the urine is sometimes very important in regard to comfort. We not infrequently find patients, when they stray extremely to one side of a pH of 6.0 to have very severe symptoms, and when the urine is changed to a pH around 6.0 they frequently are much more comfortable. Sedatives and antispasmodics may be utilized when necessary. Local heat in the form of diathermy, douches, and Sitz baths can be used according to the individual response or indication. However, if heat, or any other treatment that is being used, not only does not help but aggravates the condition, then this type of treatment should not be continued.

So far as the direct attack on the infection is concerned, any one of the new sulfonamide group of drugs may be found to be very effective. At the present time I am using sulfathiazole because I feel it is effective in more different types of organisms than any of the other sulfonamides, and there is also a little less likelihood of untoward reaction on the part of the patient. The dosage of these compounds should be rather conservative. I have never felt that tremendous doses had enough merit to allow us to give the large doses of which we so frequently hear. Not infrequently there will be a very spectacular response to as little as ½ of a sulfathiazole tablet two or three times a day. Along with these sulfonamides, any of the vitamin B-complex preparations are frequently very helpful.

The local treatment depends entirely upon the response of the patient to the various types of local treatment given. First of all, in the cases of chronic cicatricial urethritis, urethral dilation and the application of mild solutions of silver nitrate (1:5,000 to 1:1,000, or even 1 per cent) are spectacular in their effects. However, one should not persist in this type of treatment if it aggravates the symptoms. This is true of the bladder lesions as well. Silver nitrate instillations in the bladder often act like magic. However, if there are individuals in whom the bladder is made more irritable by silver nitrate, here again this type of treatment should not be persisted in.

The ureteritis cases are usually benefited by ureteral dilations and the use of the various sulfonamides. The use of heat in various ways also is of value.

Following the use of any of the sulfonamides in order to control any acute phase of such symptomatology as I have just been describing, one may use a new substance for a period of months, if necessary, in an attempt to modify to some extent the cicatricial status of these lesions when cicatrization has occurred. This substance is sulfanilic acid, and it is administered in ½ teaspoonful doses of the powder with ½ teaspoonful of soda bicarbonate in ⅓ of glass of water after meals. This substance was advocated by Felton, Hebb and Sullivan[1] to treat lymphopathia venereum, and I have found it rather effective in reducing the degree of cicatricial tissue in almost any chronic inflammatory cicatricial lesion.

The endocrines also offer relief from some of these conditions. Not infrequently when one sees the shiny atrophic appearance of the surface of the meatus and the vulva, any of the estrogenic substances may definitely change this and assist in relieving the discomfort from which the patient complains. The action of these endocrine substances and vitamins and certain chemotherapeutic agents very definitely affects tissue physiology, and I believe we are going to hear much more about them in the future.

In conclusion, attention to the few outlines which have been presented here and intelligent shifting from one to another form of treatment should definitely relieve these most frequent complaints with which the gynecologist is confronted.

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Always use mild tincture of iodine. The strong (7 percent) tincture of iodine never should be applied to a wound, according to an announcement by E. Fullerton Cook, Phar.D., Philadelphia, Chairman of the Committee of Revision of the Pharmacopeia of the United States of America, *The Journal of the American Medical Association* reports in its July 18, 1942, issue. The strong tincture evaporates quickly, leaving crystals of free iodine in the wound, which injure the tissues and prevent healing.

According to Dr. Cook, *The Journal* says, "pharmacists should always sell the U. S. P. Mild Tincture of Iodine for first aid, not the strong tincture of iodine; neither should they prepare the mild tincture by diluting the strong tincture, for then it will contain potassium iodide instead of sodium iodide, and the alcohol percentage will not be correct. Sodium salts are much better for application to a wound than are potassium salts."

GLYCOGEN STORAGE DISEASE OF THE HEART

Report of a Case

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IN 1929 von Gierke,[1] for whom glycogen storage disease has been named, described unusual glycogen deposits found at postmortem examination in the liver and kidneys of an 8-year-old girl who was known to have had a very large liver for the previous 4 and a half years. Reports of abnormal glycogen storage in the heart were published first in 1932 by Pompe,[2] and later by Bischoff[3] and Putschar.[4] Atkinson[5] in 1939 listed 59 certain cases of glycogen storage disease which had previously been reported, 12 of which were shown at postmortem examination to have chiefly affected the heart. Van Creveld[6] in the same year published a summary and discussion of the subject of glycogen storage disease.

REPORT OF CASE

Clinical course. A 3-month-old colored boy was referred to the Medical Outpatient Department of Children's Hospital after the discovery of tuberculosis in his mother and because of his poor appetite and weight loss. One day later (on September 25, 1941) he was referred to the Cardiac Clinic because of the finding of a very large heart on X-ray examination. The child was born at full term by normal delivery. His weight at birth was 8 pounds, 11 ounces. Nothing abnormal was noted at birth and during the first few weeks of life. He was bottle-fed and took his feedings well. However, during the 4 to 6 weeks preceding the examination at the Cardiac Clinic he gradually grew listless, his cry became weak, he lost interest in feedings, and there was an obvious weight loss. The child was found to be poorly nourished and appeared ill. There was a constant whining cry. The respirations were very rapid. There was no cyanosis. The fingers were not clubbed. The heart was considerably increased in size; the apex impulse was found well beyond the midclavicular line in the 5th left interspace. The heart rate was rapid, approximately 150 per minute, and the rhythm was regular. There was a loud harsh systolic murmur audible over the entire chest, but best heard at the apex and in the left axilla. It was well heard in the pulmonary valve area also. There were normal pulsations in both femoral arteries. The liver and spleen were not palpable.

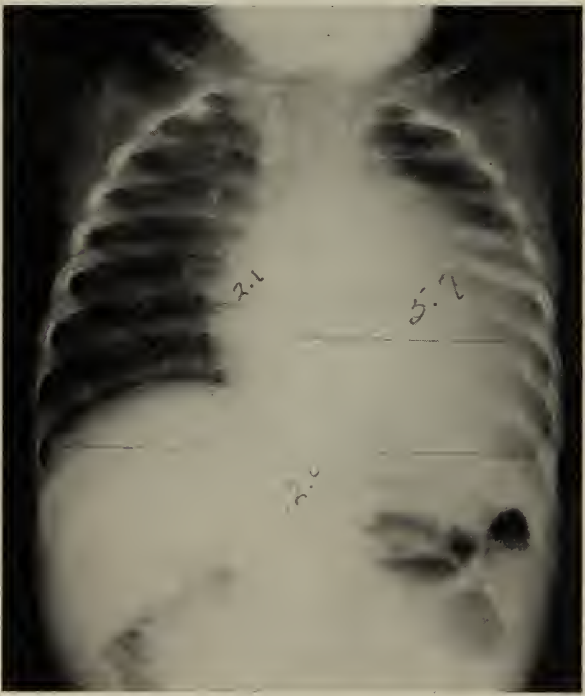

FIG. 1. Marked cardiac enlargement, particularly in region of left ventricle (transverse diameter of heart 7.8 cm., internal diameter of chest 12 cm.). The liver enlargement is shown.

On his second visit to the Clinic, after an interval of 1 week, his weight was noted to be 9 pounds and his height 25 inches. No change had been noted by the foster mother. The systolic murmur seemed to be loudest in the 2nd interspace at the left sternal border. X-ray examination showed marked cardiac enlargement, with particular enlargement of the left side of the heart. The internal diameter of the chest was 12 cm., and the transverse diameter of the heart 7.8 cm. The lung fields did not appear remarkable (fig. 1). Electrocardiograms made on September 29 and October 2, 1941, were similar, and showed sinus tachycardia, rate 145 to 150, P-R interval 0.1 second, no abnormal axis deviation, inverted T waves in all 3 leads, deeply inverted T waves in leads 2 and 3, and QRS duration of 0.08 second (fig. 2). A diagnosis of congenital heart disease with probable congenital aberration of the coronary circulation was made.

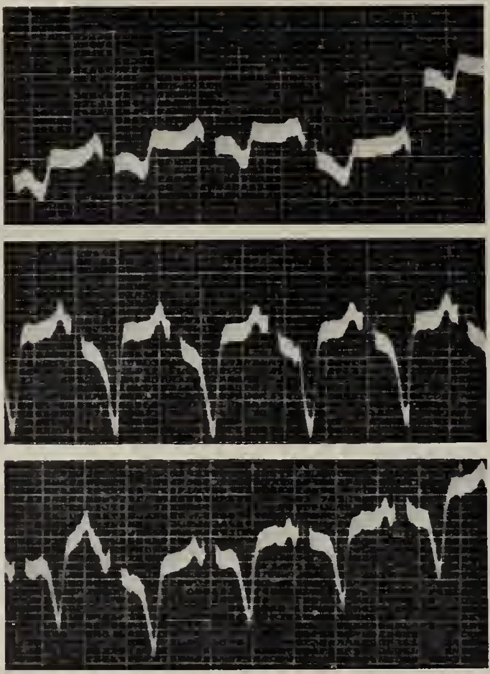

Fig. 2. Electrocardiogram, October 2, 1941, leads 1, 2 and 3.

On October 7, 1941, the child was admitted to the Hospital because he was cyanotic and had refused all feedings for 2 days. His temperature was 101.4° F. rectally and remained so for 12 hours. There was moderate generalized cyanosis. The lungs were clear except for a few râles at the left base. The heart murmur was described as a loud systolic murmur over the precordium. The liver edge was felt 2 fingerbreadths below the rib margin. There was no edema. Urinalysis showed nothing abnormal. Death occurred 24 hours after admission, the temperature rising suddenly to 105° F. just before death.

Necropsy. At postmortem examination done by Dr. Leroy Robins the child weighed 3,500 Gm. and measured 68 cm. in length. The brain was not examined. The pleural cavities were normal. The left lung was partially collapsed. The lower and middle lobes of the right lung were smooth, firm, and brick red; the appearance was that of an early lobar pneumonia. The right lung weighed 81 Gm. and the left 32 Gm. The pericardial sac contained 20 to 25 c.c. of straw-colored fluid.

The heart was markedly enlarged; there was considerable hypertrophy of all chambers, particularly of the left ventricle. The heart weight was 131.5 Gm. (normal, 23 Gm.[7]). The thickness of the right ventricle was 5 mm., and of the left 11 mm. The heart valves and endocardium were normal. There were no abnormal shunts or communications within the heart or in the great vessels.

The liver was moderately enlarged, the edge extending 2.5 cm. below the costal margin in the right midclavicular line. It was smooth and reddish brown. The cut sections gave the appearance of congestion. The liver weighed 210 Gm. (normal, 140 Gm.[7]).

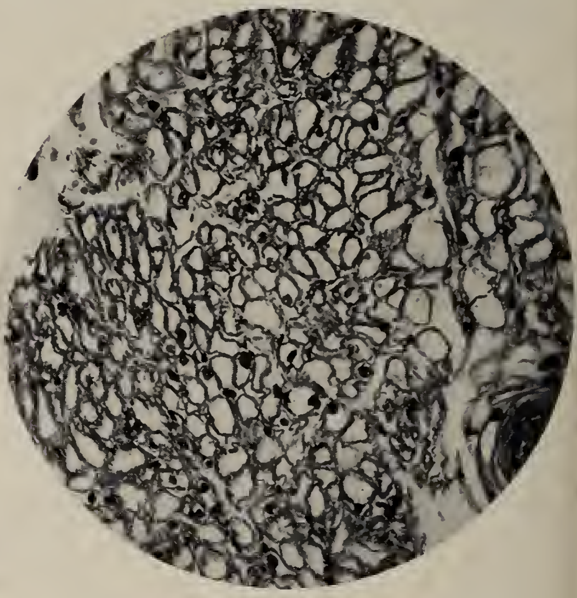

Fig. 3. Vacuolization of myocardial fibers. Reduced from a magnification of 338 times.

The remainder of the postmortem examination was not remarkable.

Microscopic examination of sections of the right lung showed characteristic evidences of lobar pneumonia. The heart showed marked transparency of the cross sections with vacuolated muscle-fibers, only the sarcolemma and the eccentric nuclei staining well (fig. 3). The polygonal cells of the liver showed marked vacuolization. The islet tissue of the pancreas appeared slightly more prominent than usual but was otherwise normal.

The glomeruli of the kidneys had a tufted appearance, and one epithelial crescent was noted. In a few areas of the kidneys there were changes in cell structure similar to those found in the heart and liver. Sections of other organs were not unusual.

Through error the blocks of tissue removed from the heart, liver and kidneys were placed in formalin solution rather than in absolute alcohol. When sections from these blocks were stained with Best's stain no unusual amounts of glycogen were evident on histologic examination. However, since the hematoxylin and eosin stains revealed findings which were characteristic of the reported cases of glycogen storage disease there seemed to be no reasonable doubt that abnormal glycogen deposits were present to cause marked vacuolization in the heart and to a lesser degree in the liver and kidneys.

COMMENT

The cause of glycogen storage disease is unknown. It is generally agreed that all muscle makes glycogen from dextrose but does not change glycogen back to dextrose. When glycogen is broken down in muscle it is mainly converted either to lactic acid or to carbon dioxide and water. Mason and Andersen[8] in a recent interesting treatise have postulated that in patients with abnormal glycogen deposits in the heart the probable defect is a congenital one in the heart concerned with the abnormal incomplete conversion of hexose 6-phosphate to lactic acid or of the latter to carbon dioxide and water, or, in brief, an incomplete breakdown of glycogen in the heart muscle, the result of local congenital fault in glycogen metabolism.

Glycogen storage disease involving the heart is a serious disturbance, death usually occurring in the first few months of life, sometimes suddenly, but commonly as the result of intercurrent infection. Of the 12 cases studied at necropsy and listed by Atkinson[5] the average duration of life in 11 was 6 months. One of this series, that of an 11-year-old boy, represents the longest survival reported to date in a proved case of glycogen storage disease of the heart. Patients with glycogen storage disease of the liver survive longer than do those with glycogen storage disease of the heart. Several patients have lived to adolescence; 1 living patient was 25 years old in 1935, the date of the last report.[9]

Glycogen storage disease of the heart is difficult to recognize clinically. The usual diagnosis made during life in the reported cases is congenital idiopathic hypertrophy. The diagnosis of congenital aberration of the coronary circulation was made in the patient reported here because of the similarity of the findings to those in a 4-month-old boy with cardiac hypertrophy and inverted T waves in the electrocardiogram reported by Bland, White and Garland in 1933.[10]

Only 1 other electrocardiogram has been published in glycogen storage disease of the heart; this was from a patient reported by Sprague, Bland and White,[11] who, however, did not describe the electrocardiogram fully because of the artefact due to overshooting.* Schnitker in his book, "The Electrocardiogram in Congenital Cardiac Disease" (Harvard University Press, 1940, opposite page 20), published the electrocardiogram of this patient of Sprague, Bland and White, and it showed inverted T waves in leads 1 and 2, diphasic to upright T waves in lead 3, and considerable depression of the S-T segments, this last finding probably the result of the artefact from overshooting.

In at least 2 reported cases[12, 13] the fasting blood sugar and the response of the blood sugar following the injection of epinephrine were normal. In glycogen storage disease of the liver it has been found that there is a low fasting blood sugar and failure of the blood sugar to rise after the injection of epinephrine. Also there has usually been ketonuria.

There are no reliable diagnostic signs to indicate the presence of this rare metabolic disturbance. However, it would seem that if there should occur a low fasting blood sugar and a failure of the blood sugar to rise after the injection of epinephrine associated with inverted T waves in the electrocardiogram of a child or infant with cardiac enlargement, the diagnosis of glycogen storage disease of the heart should be considered.

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* Personal communication from Dr. Paul D. White, Boston, Mass.

Although it is generally thought that patients with glycogen storage disease of the heart do not present important murmurs, in at least 2 of the reported cases[11, 14] a loud harsh systolic murmur loudest at the cardiac apex has been described. In the patient reported here the murmur was considered loudest at the apex on one occasion and possibly somewhat louder at the pulmonary valve area a week later. The reason for the presence of the murmur in these cases is not clear.

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Points to additional evidence of the need for enriched flour. Recent investigations provide additional evidence that the average diet in this country is likely to be deficient in thiamine (vitamin B_1) and emphasize the important role that enriched flour can play in helping overcome this deficiency, *The Journal of the American Medical Association* for July 25, 1942, points out in an editorial on "Thiamine in the American Diet." *The Journal* says:

"In a recent contribution on the thiamine content of the American diet, R. R. Williams and his co-workers state that their plan involved an attempt 'to formulate a sequence of diets which contain all of the more important foodstuffs of the American dietary in proportions corresponding to the annual per capita consumption of each.' Significance is given the conclusions through the use, as the principal basis of computation, of the extensive data of H. K. Stiebeling and E. F. Phipard on diets of families of employed wage earners and clerical workers in cities. The assay was carried out by a modern chemical method supplemented, when indicated, by animal tests. With a daily intake of 2,500 calories as a basis for computation, the comparative contribution of the various food groups to the energy intake and to the total thiamine consumption is given.

"The cereal products account for 47 per cent of the total daily calories and, when the white bread was not fortified with added vitamin, for 24 per cent of the thiamine. The dairy products, providing 18 per cent of the energy, give 21 per cent of the thiamine. Meat, which accounts for 15 per cent of the calories, is responsible for over 26 per cent of the thiamine, and of this total pork provides almost 22 per cent alone. The energy yielded by the vegetables is only 8.8 per cent, but the proportion of the total vitamin B_1 is high, namely 21.5 per cent. The fruits provide 4 per cent of the calories and 9 per cent of the thiamine. Corresponding to the total daily energy intake of 2,500 calories is a total vitamin B_1 intake of about 0.8 milligram.

"The Food and Nutrition Board of the National Research Council has given 1.8 mg. of thiamine as the daily requirement of the adult. The data of Williams and his co-workers indicate that the thiamine content of the average diet, such as was consumed by the middle two thirds or three fourths of the American people prior to the advent of enriched bread, would be considered inadequate at present. If enriched bread replaced the white bread in the diet under consideration, the vitamin B_1 would be raised to an intake of 1.3 milligrams a day, a value approaching a satisfactory level.

"The foregoing discussion emphasizes the importance of bread, milk and meat as sources of thiamine in the average American diet. It adds support to various earlier contentions that our national diet is likely to be inadequate in this respect and demonstrates the possibility of bringing the intake of vitamin B_1 into the adequate range through the use of enriched flour."

CLINICO-PATHOLOGIC CONFERENCE*

THE DEPARTMENT OF MEDICINE, GALLINGER MUNICIPAL HOSPITAL

MILIARY TUBERCULOSIS

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March 5, 1942.

Dr. Yater: Dr. Switzer, Intern on ward L, will present the next case.

Dr. Paul Switzer: This 27-year-old colored man was admitted to this hospital on February 17, 1942. His legs had been swollen for the preceding three weeks, following a little fall. The swelling was associated with dyspnea, which had also become progressively worse. He had been a laborer all his life, and had complained occasionally for several years of mild shortness of breath. In 1938 he had enrolled in a CCC Camp, at which time he developed transient dyspnea and swelling of the ankles. He was studied at Walter Reed General Hospital for this episode. He has had two previous admissions to the psychopathic ward of this hospital because of alcoholic hallucinosis. On both admissions he was found to have a mild hypertension. The remainder of the history was essentially negative.

Physical examination revealed an acutely ill patient who was orthopneic and slightly confused. He had anasarca, his face, chest, abdomen and legs being edematous. His sclerae were icteric. There was a swelling of the right side of the neck, which the patient said had been present for several years. There were moist râles throughout both lungs, more marked at the bases. The heart appeared to be moderately enlarged, its rate was rapid with regular rhythm, and a diastolic gallop was present. There was ascites. The temperature was 102°F., the pulse rate 130 per minute, the respiratory rate 32 per minute, and the blood pressure 155/100 in both arms.

The urinalysis was normal, the hemoglobin was 74 per cent, the red blood cells numbered 2,700,000 per cubic millimeter of blood, and the white blood cells numbered 5,700 per cubic millimeter of blood, with a predominance of polymorphonuclear neutrophiles. The icteric index was 25 units. The total serum proteins and the albumin-globulin ratio were normal. A Kahn test of the blood was negative. The blood urea nitrogen was 16 mg., and the blood nonprotein nitrogen was 23 mg. per 100 c.c. of blood. Examinations of two specimens of sputum were negative for tubercle bacilli, and a tuberculin patch test was negative. Agglutination tests for typhoid fever, paratyphoid A and B, and brucellosis were all negative. Two blood cultures were negative. A roentgenogram of the chest showed the heart to be enlarged and evidence of pulmonary congestion (fig. 1). The venous blood pressure was excessively elevated, and the circulation times were so prolonged that they could not be determined. The electrocardiogram showed right axis deviation and low voltage.

The patient was digitalized slowly, and given large doses of vitamin B, both orally and by intramuscular injections. By the time he was fully digitalized his cardiac condition had improved out of proportion to the degree usually effected by digitalization. By the tenth hospital day he had lost 39 pounds, and the anasarca had practically disappeared. The leukocyte count remained consistently low.

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*These conferences are held under the Chairmanship of the Head of the Department of Medicine, Dr. Wallace M. Yater, every Thursday from 2 to 4 p.m. Cases of particular interest, or those presenting diagnostic problems, are presented and discussed. This is a resumé of the discussion of such a case.

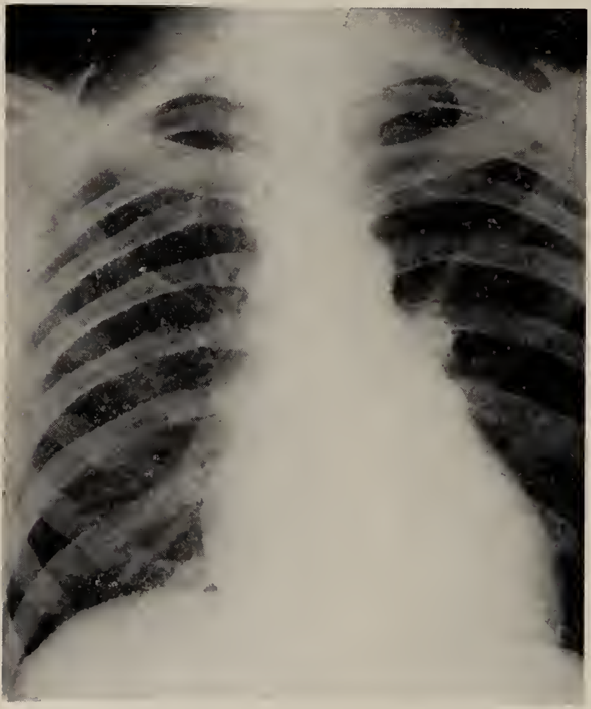

FIG. 1. February 26, 1942. Moderate enlargement of heart.

On March 2 examination of the lungs showed depression of breath sounds and fine moist râles, particularly in the region of the right hilus. Another roentgenogram of the chest, however, revealed that the congestion had practically disappeared, and the heart had become smaller. The jaundice had disappeared, but the anemia was still present. During this time the patient had continued to have fever daily, reaching as high as 104°F. Sulfadiazine had been administered, but because of lack of response it was discontinued on March 3. The venous pressure at this time was 50 mm. of water with a rise to 80 mm. on right upper quadrant pressure. The arm-to-tongue circulation time with magnesium sulfate solution was 14 seconds.

Examination on March 6 revealed very little change, and the temperature was 103.5°F. rectally. The agglutination tests were all repeated and were still negative. More blood cultures were made and were negative. The patient became confused and disorientated. Examination of the chest revealed no change. There was no lymphadenopathy, and the spleen could not be felt. A cisternal tap was normal.

Because the patient was an alcoholic and had evidence of heart failure with anasarca, and no plausible reason therefor, it was thought that he most likely had beriberi with heart failure. However, we could not explain the persistent fever, nor the rapid disappearance of the anasarca and other evidences of heart failure.

DR. YATER: Do you feel that you have ruled out subacute bacterial endocarditis?

DR. SWITZER: Several blood cultures have been negative, and there is no evidence of rheumatic heart disease. I do not know how to explain his history of attacks of dyspnea, but the patient was allowed to remain in the CCC Camp, and apparently the physicians treating him did not find evidence of chronic heart disease.

DR. C. J. MULTHAUF, Junior Resident in Medicine, Georgetown Division: The etiology of the heart failure here is one of our problems. The other is the fever of long duration with leukopenia. We have considered the possibility of acute cor pulmonale, due possibly to the presence of small thrombi in many arteries of the lungs. Rheumatic myocarditis is easily ruled out, I believe, because of the rapid improvement of the congestive failure.

DR. HUGH H. HUSSEY: It appeared to me that the anasarca and the venous pressure were out of proportion to the degree of cardiac enlargement and the evidences of heart failure.

DR. YATER: The gonococcus is one of the most common causes of acute endocarditis. If this condition exists, sooner or later there will appear a basal diastolic murmur, since the vegetations are almost always on the pulmonic or aortic valves. The commonest fevers of this type, however, with leukopenia are typhoid fever and miliary tuberculosis. Miliary tuberculosis isn't always associated with leukopenia, but, if it is, there is a preponderance of polymorphonuclear neutrophiles as in this case. In either of these diseases it would be hard to explain the onset with anasarca and congestive failure. Does anyone think this could be acute disseminated lupus erythematosus?

Dr. Sol Katz, Junior Resident in Medicine, Georgetown Division: I don't think so. There is no serous membrane involvement, and no joint trouble. The urinalysis is normal, and there are no skin lesions. Also, the spleen is not palpable. I wonder if there isn't a true myocarditis here with resulting heart failure. The heart is still somewhat enlarged.

Dr. Switzer: Daily examinations of the heart have revealed no important change except that the gallop rhythm has disappeared.

Dr. A. J. Sullivan, Chief Resident Physician: Is it possible that the patient could have developed influenza as he was coming out of an attack of congestive failure? Influenza might explain the fever and leukopenia.

Dr. Yater: I believe the course of the disease has been too long for influenza. Usually the fever in that disease lasts only a few days.

Dr. Thomas Keliher: We should consider the possibility of atypical hypertensive heart disease with multiple myocardial infarctions and mural thrombi. It is possible this is a picture of early chronic cor pulmonale. Miliary tuberculosis might explain the fever best. However, the pulse rate is not in proportion to the fever, and the pulse is dicrotic.

Dr. Yater: It is hard for me to believe that the anasarca was due to heart failure alone. One would expect a much larger heart with so much anasarca. Furthermore, the anasarca disappeared too rapidly. Other causes of anasarca, of course, are beriberi, renal insufficiency and trichiniasis. There is not sufficient renal insufficiency to explain the picture, and the history is not good for trichiniasis. The disappearance of the anasarca was too fast for beriberi. I believe that all we can say at this time is that certain things cannot be ruled out as possible causes of the fever. These are typhoid fever, acute bacterial endocarditis, aleukemic leukemia, and miliary tuberculosis. The patient has been ill now for over five weeks. By this time we would expect roentgenogram evidence of miliary lesions in the lungs if this is miliary tuberculosis. However, in some cases the appearance of the lesions is considerably delayed.

April 16, 1942.

Dr. Switzer: I want to report again on the course of the patient who had anasarca and fever. He has continued to have fever, ranging from 103°F. to 104°F. rectally. On March 19 he developed an unproductive cough, the heart was still moderately enlarged, but larger than on admission. There were still some râles in the lungs. Repeated blood cultures, agglutination tests and second strength intradermal tuberculin test were all still negative. Roentgenograms of the chest still did not reveal anything of importance. On April 1 the spleen became definitely palpable, but the liver was not palpable. By April 6 the heart was much smaller than it had been on admission. The nonproductive cough still persisted, and there was again an icteric tint to the skin. There had been no return of the edema. There were râles only in the right lower lobe. The spleen was palpable two fingerbreadths below the costal margin. The liver still was not palpable. On April 10 a roentgenogram of the chest showed for the first time innumerable small discrete areas of increased density throughout the entire left lung field. There were also some similar areas in the right lung field, but they were not so numerous nor so striking. The appearance suggested atypical miliary tuberculosis. On April 11 another tuberculin patch test was negative. Today another roentgenogram of the chest shows the same miliary distribution of small opacities throughout the left lung field, and to a lesser extent the right (fig. 2).

Dr. Yater: In spite of the negative tuberculin patch tests, I believe the evidence is sufficient to allow us to make a diagnosis of miliary tuberculosis. However, we are still unable to explain the exact nature of the early stage with anasarca, orthopnea, moderate enlargement of the heart, increased venous pressure and prolonged circulation times.

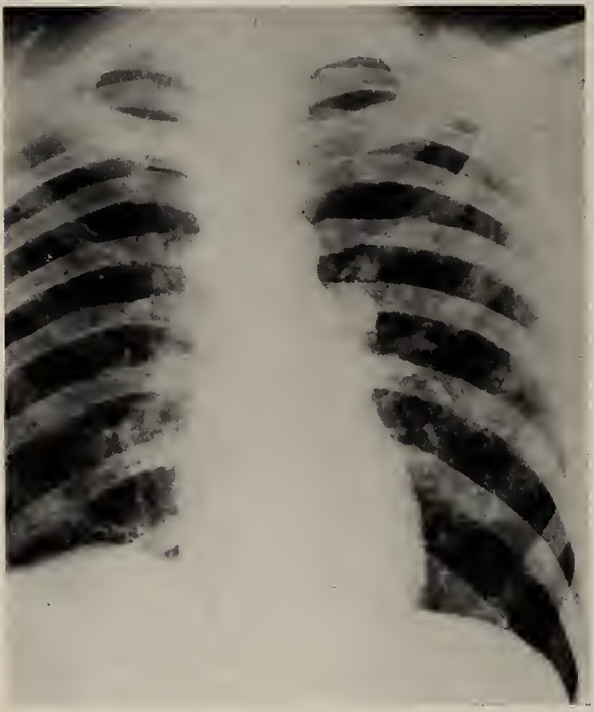

Fig. 2. April 15, 1942. Opacities in both lung fields; heart smaller.

May 14, 1942.

Dr. Moravec: The patient with the prolonged fever, leukopenia and roentgenographic evidence of miliary infiltration of the lungs died on May 2. His temperature had remained elevated during the 71 days since admission. After the last report on his condition at this conference, he became progressively weaker and thinner. A roentgenogram made on April 24 showed moderate increase in the number of opacities in the lung fields.

A necropsy was done on May 4 by Dr. Owen, the salient points of which are as follows: The body was that of a well-developed, markedly emaciated colored man, whose estimated body weight was about 85 pounds. There was no superficial edema, and no jaundice. The peritoneal cavity contained about 150 c.c. of serosanguineous fluid. The peritoneum itself was thickened and studded with small yellowish nodules. The pericardial cavity contained 20 c.c. of slightly cloudy yellowish fluid. There were patches of soft yellowish exudate on both parietal and visceral surfaces. The pleural cavities did not contain any free fluid. There were several firm adhesions involving the entire upper lobes. The lungs throughout showed small yellowish nodules suggesting tubercles. The heart weighed 375 grams. It appeared to be normal in every way except for the pericardial exudate. Throughout the parenchyma of both spleen and liver there were myriads of small, firm, opaque, yellowish areas, measuring from a few millimeters to 2.5 cm. in diameter. The rest of the examination was negative.

A microscopic examination of the tissues was reported by Dr. Eugene R. Whitmore. The heart muscle appeared normal except for some separation and vacuolization of myocardial fibers. The coronary arteries showed a moderate amount of subintimal hyalinization and fibrosis. The section of pericardium examined was essentially normal. Sections of the lung showed many circumscribed areas of complete necrosis in which all cell detail was lost. Around these areas were alveoli filled with exudate containing many round cells and histiocytes. Similar areas of complete necrosis surrounded by lymphocytes and mononuclear cells were found to be scattered focally throughout the liver. At the periphery of these lesions there were many giant cells. Sections of the spleen showed similar lesions, even more numerous. There were somewhat similar areas beginning to develop in the kidneys. In the lymph nodes there were also some completely necrotic areas surrounded by polymorphonuclear cells, round cells, macrophages and giant cells.

Dr. Yater: This case illustrates an atypical course of miliary tuberculosis. The duration was much longer than usual. The onset was extremely unusual, and we are still unable to explain the initial features. The roentgenographic evidence of miliary invasion of the lungs was late in developing. A point may be made of the persistent leukopenia with relative increase in the polymorphonuclear neutrophiles. When leukopenia is present in a case of miliary tuberculosis the polymophonuclear neutrophiles are always relatively increased in number. In this case repeated tuberculin tests were negative, the patient never developing any immunity. This is not uncommon in cases of miliary tuberculosis.

Research shows muscle spasm is present in poliomyelitis. Substantiation of the concept of the Australian nurse, Miss Elizabeth Kenny, that muscle spasm "is a damaging and ever present symptom of the disease infantile paralysis . . ." is reported in the July 18, 1942, issue of *The Journal of the American Medical Association* by R. Plato Schwartz, M.D., and Harry D. Bouman, M.D., of the University of Rochester School of Medicine and Dentistry, Rochester, N. Y.

By making graphic records of the electric current produced by muscles in action, the two investigators found that spasm exists not only in the muscle opposite (antagonist) the muscle weakened by infantile paralysis, as contended by Miss Kenny, but it also exists in the weakened muscle itself and in muscles in parts of the body in which clinical symptoms of the disease are not evident.

The term "muscle spasm" denotes a group of symptoms including twitchings, excessive irritability of the muscle to stretching and a mcre or less continuous state of contraction of the muscle fibers.

Drs. Schwartz and Bouman explain that the recent increase in favorable observations regarding the Kenny concept of spasm in the acute stage of infantile paralysis has not been accompanied by evidence from any investigation aimed specifically at verifying this concept. Accordingly, they say, "it was necessary to approach this question of muscle spasm by a method which would be independent of, but could be correlated with, clinical observations.

"Action currents are among the means most suitable for recording extremely minor contractions of muscle. . . . The rigid principles that define the technic of this method were applied to the study of patients: (1) 7 with infantile paralysis, (2) 3 with spastic paralysis and (3) normal subjects for control. . . ."

Other conclusions reported by the two investigators are as follows:

"The spasticity is of a reflex nature and is not present in the completely paralyzed muscle.

"The spasticity can be stronger than the voluntary contraction that the muscle is able to perform, as adjudged by action currents.

"When the strength of the voluntary contraction increases through treatment, the spasticity decreases.

"Our investigation has shown that spasticity is present in infantile paralysis. Whether the spasticity is actually responsible for weakening of the muscle or whether it is a phenomenon which is merely another consequence of the disease is a question which cannot be answered at the present time."

Suggest means of lowering incidence of hemorrhage of the newborn. The administration of vitamin K to the mother while she is in labor will prevent the depression of the prothrombin (blood clotting) level of the newborn and should prove effective in lowering the incidence of hemorrhage of the newborn, J. E. Fitzgerald, M.D., and Augusta Webster, M.D., Chicago, declare in the August 1, 1942 issue of *The Journal of the American Medical Association.* "It is well known," they say, "that various types of hemorrhage in the newborn account for a considerable percentage of stillbirths and neonatal deaths. . . ."

They found that "in none of the 641 babies whose mothers had vitamin K during labor was there any evidence of neonatal hemorrhage." Administration of vitamin K (by injection into a muscle) to babies with hemorrhage resulted in a strong increase in the prothrombin level and prompt cessation of bleeding.

In their conclusions they say, "There is a normal depression of the prothrombin level of the newborn from the second to the fifth day. This depression is much greater when certain analgesics are administered to the mother during labor. . . .It seems particularly desirable that vitamin K should be administered when barbiturate analgesics are used."

President's Page

RECRUITING OF PHYSICIANS

Most encouraging to those who view the war realistically is the fact that undue optimism among the people is giving way to honest appraisal of our situation. There has come a realization that if we are to win, we must give all we have. Compromise is out. Victory must be complete or all is lost.

The medical profession's role in the conflict is a vital one, for upon its efforts depends the health of our military forces and the civilian population. Neither must be neglected if the Nation is to carry on effectively.

Doctors appreciate what this means. In the District of Columbia, efforts are being made to provide the quota of physicians demanded by the armed forces. Although definite data is not available, it is the belief of the District Procurement and Assignment Committee that the response has been good. Nevertheless, more physicians are needed and it is the task of the Medical Officer Recruiting Board located in the Medical Society's building to stimulate physicians to seek commissions.

It is apparent that physicians in the District do not understand the functions of the District Procurement and Assignment Committee and its relation to the Medical Officer Recruiting Board. The Committee's primary responsibility is to advise the national Procurement and Assignment Service and local draft boards, when requested, as to whether or not a physician of draft age is essential to the community from the standpoint of his professional services. It is outside the province of the Committee to base its decisions on the economic situation of the physician or other conditions which make his entry into the armed forces a hardship. Aside from these duties, the Committee must safeguard the health of the civilian population by not permitting the withdrawal of too many physicians.

Although the District Procurement and Assignment Committee coöperates with the Medical Officer Recruiting Board, the Board operates as an independent unit under the War Department. Many physicians seem to be under the impression that its activities are under the direction of the Medical Society. This is incorrect. The Medical Society has been happy to make office space available to the Board, whose sole function is what its name implies.

With this explanation of the purpose of the District Procurement and Assignment Committee and the Medical Officer Recruiting Board, it is my hope that physicians of Washington who can do so will respond wholeheartedly. When the time comes that no more physicians can safely be spared, the Committee will take prompt action.

This is no time for vacillation. The crisis is here. We are face to face with a serious threat to our existence. It is now or never.

Editorials

HOSPITALS IN WARTIME WASHINGTON

Although the shortage of hospital beds in the District of Columbia has been alarmingly acute for the last two years, no solution is yet in sight. Conferences, surveys and discussions have followed one another "round and round" but to date they have produced no visible results.

In discussing conditions facing many persons needing hospital care, one hospital executive said that voluntary institutions have found themselves in an impossible situation. He placed the blame on public officials who, he contended, were unrealistic, if not worse. To begin with, he said, the assumption that Government workers desired to go to Gallinger Municipal Hospital or any other institution for free bed service was erroneous. No matter whether their incomes are in the lower or higher brackets they do not wish to be confined to free wards but seek medium priced, semi-private accommodations, preferably in voluntary hospitals. These, it happens, are at a premium. The proposed addition of such beds to hospitals, he argued, would go a long way toward remedying the acute situation which now exists.

Another phase of the problem is the economic status of new Government workers. Many come to Washington with no reserve funds. They have a job and a prospective income but if they become ill before accumulating a backlog, they enter the hospital unprepared to meet the expenses of their care. The Government understandably refuses to be responsible for the hospitalization of these employees with the result that the hospital finds itself in a position where it must accept the risk of being able to obtain some payment later from the patient, or if that does not seem probable, turn to the Community Chest or some other agency which will accept the responsibility for these patients as charity cases.

The solution is, first of all, to provide the necessary beds, preferably by building additions to existing institutions which, though short of nursing personnel, can by training nurses' aides, staff such additions; and to urge new Government workers to subscribe to group hospitalization plans which will afford them the protection they so badly need.

Nothing reveals more clearly the incompetent leadership which has characterized the much talked of hospital expansion program than an examination of the record.

Health Security Administration first called attention to the scarcity of hospital beds, especially for obstetric cases, in 1940. Although the situation became acute early in 1941, lack of funds and disagreement among hospitals stymied a program which was proposed.

On March 25, 1941, hospital presidents met on their own initiative at the offices of the Administration to discuss the need for hospital construction and how it might be financed. It was hoped that funds could be obtained from the Government following enactment of the first Lanham Bill, which was signed by President Roosevelt on June 28, 1941. However, negotiations for funds came to naught for the alleged reason that Washington was not a defense area. Congressman Lanham introduced another bill on February 28, 1942 to amend the original Lanham Act, authorizing funds for community facilities and defense housing in the Washington metropolitan area.

Early in February the Medical Society of the

District of Columbia had sought to impress the District Commissioners with the importance of immediate hospital construction so as to utilize services of local physicians to the best advantage. Many physicians had already been called into military service and as the number in practice in the District was reduced, hospitalization of more patients would inevitably be necessary. Commissioner Mason thereupon called a meeting of physicians and hospital officials to demand support of his efforts to obtain hospital additions. On February 11, 1942, the Hospital Presidents' Association filed with Commissioner Mason an offer to assume responsibility for staffing and maintaining hospital additions financed with Government funds and providing for 867 new beds, which would be distributed between eleven hospitals.

It seemed for a time, then, that Washington would at last have the hospital beds it needed but somehow or other nothing came of it. Recently Commissioner Mason has appointed an advisory committee to deal with the hospital situation. Funds, it is understood, are now available, but other Government agencies, including the War Production Board, the Federal Works Agency, the United States Public Health Service, and the War Department have a hand in the situation and there have been "complications." When and where construction will begin no one can say.

On April 25, 1942, the House Appropriations Committee challenged the need for additional beds on the grounds that there was a large number of vacant beds at Gallinger Municipal Hospital. The Federal Works Agency immediately filed with the Appropriations Committee an explanation as to why a general hospital should be considered full although 15 per cent of its total bed capacity might be unoccupied.

Finally, on July 3, 1942, the Office for Emergency Management called upon the Health Security Administration to compile a list of hospitals in the metropolitan area showing the total number of beds and average daily census. The O.E.M. also requested information as to the number of practicing physicians and the total population as of July 1, 1942, and indicated that they were about to employ additional personnel to make a survey in order to establish the need for preventing more physicians from this area being called into the military services or the need for transferring civilian physicians, if necessary, from other parts of the country to the Washington metropolitan area.

There are, of course, many details that have been left out of this review. However, it is apparent that underneath all of the moves which have been made by various groups there have been differences of opinion, selfishness and politics. It is high time that a stop be put to this sort of thing. If the District Commissioners and the Government agencies are seriously desirous of providing the necessary hospital beds, they should act promptly with the aid and guidance of hospital authorities.

Physicians have a vital interest in this problem because the welfare of their patients depends upon the adequacy of local hospitals. Wartime Washington can ill afford the muddling which has been going on in regard to hospitals, and prompt and decisive action is called for.

MATERNAL MORTALITY IN THE DISTRICT OF COLUMBIA*

Marked changes have taken place recently in official statistical reports relating to the District of Columbia. We may consider population for example. The population of the United States in 1941 had increased about 26.2 per cent over 1920. During the same time the population of the District of Columbia had increased about

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* With the exception of figures quoted from the Obstetrical Board and percentages, all figures in this editorial were taken from official reports of the Bureau of the Census.

61.4 per cent. The Census estimates the 1941 United States population as 133,038,756 and the District of Columbia as 703,000. Moreover, its estimate of the District of Columbia population for January 1, 1942, showed a further increase of 93,000, or 13.2 per cent over 1941. This indicates an enormous migration to this urban center.

Naturally the number of live births annually in the District of Columbia has also increased. From 1935 to 1941 the number of live births per year was as follows:

District of Columbia

YEAR	LIVE BIRTHS
1935	10,803
1936	11,704
1937	12,343
1938	12,938
1939	14,037
1940	15,309
1941	18,294*

* Provisional.

Hence in 6 years the number of live births increased almost 70 per cent. Up to May 15 of this year the Bureau of the Census had received 6,582 birth certificates for the first four months of 1942, 890 more than in the same period last year. If this increase continues there may be 21,000 births in the District of Columbia in 1942.

The birth rate also has risen. Between 1940, when the rate was 23.1 per 1,000 enumerated population, and 1941, when the provisional rate was 24.7 per 1,000 of estimated population, the increase in rate in one year was 6.9 per cent. The provisional birth rate for the United States as a whole for 1941 was 18.9.

In June 1937, the Obstetrical Board began its study of maternal mortality in the District of Columbia. The following table of figures from the Bureau of the Census shows the trend from 1936 in the United States as a whole and in the District of Columbia.

Maternal Mortality Rates (Bureau of the Census)*

YEAR	UNITED STATES			DISTRICT OF COLUMBIA		
	Rate	Rate by Race		Rate	Rate by Race	
		White	Other		White	Other
1936	57	51	97	69	49	110
1937	49	44	86	58	39	96
1938	44	38	85	56	44	80
1939	40	35	76	52	41	76
1940	38	32	77	29	23	43
1941†						

* Per 10,000 live births.

† Census figures for rate for 1941 are not yet available.

The Obstetrical Board has made three reports with provisional figures, the first covering the period June 1, 1937 to May 31, 1939; the second and third for the calendar years 1940 and 1941, respectively. Its figures, when final, will differ from those of the Bureau of the Census because the Board reports as maternal deaths those resulting directly or indirectly from pregnancy while the Census includes necessarily only those directly ascribed to "puerperal causes." The following table gives the Obstetrical Board's provisional figures:

Maternal Mortality Rates (Provisional) in the District of Columbia (Obstetrical Board)*

PERIOD	RATE	RATE BY RACE	
		White	Other
24 months, 1937–39	58	42	93
1940	34.2	28	47.5
1941	26.7	22.2	36.3

* Per 10,000 live births.

There were 150 deaths per year in the first 24-month period, 52 in 1940 and 48 in 1941. If the first period rate had not changed, 94 more women would have died in 1940 and 1941 from maternal causes than did so die.

The official Census release shows that in 1939 the District of Columbia was 38th in the list of states from the standpoint of maternal mortality rates but in 1940 had moved up to 12th place. It is anticipated that when the 1941 figures are released it will occupy a still higher position.

The Obstetrical Board noted that 1941 was the second consecutive year in which there were no maternal deaths ascribed to anesthesia, analgesia, asphyxia from aspiration of vomitus, hyperemesis gravidarum or placenta previa.

The significant improvement in maternal mortality in the District of Columbia will of course be a source of satisfaction to physicians, public health authorities and the public at large. Particularly will this be so because, in the two years of greatest gains, 1940 and 1941, physicians, hospitals and public health facilities have been strained to the utmost in attempting to meet the demands of the expanding population indicated in the first paragraph.

Factors in improvement are doubtless of many different kinds. Among them may be mentioned the increasing recognition on the part of the public of the need for adequate prenatal, natal and postnatal care; the improvement in organization and administration of hospital staffs in the interests of better obstetrical care; and the evident progressively higher quality of professional obstetrical care furnished by the medical profession.

One of the special problems in maternal mortality relates to deaths from abortion, which in each of the reports made by the Obstetrical Board constituted from 23 to 25 per cent of the total maternal deaths. The 11 abortion deaths occurring in 1941 were all due to sepsis. Manifestly, any way in which abortion deaths may be prevented, the largest single factor in maternal deaths, will serve to reduce the maternal mortality rate even further.

The Obstetrical Board feels that the maternal mortality rate may be reduced further. For example, 5 patients who died of eclampsia last year had no prenatal care and the lack of prenatal care was considered the vital preventable factor. There is more to be done in acquainting prospective mothers with the need for prenatal care.

Steps now being taken to perfect hospital organization and administration will, in the opinion of the Board, figure largely in the further reduction of maternal mortality. Furthermore, the continued march of scientific progress opens up new ways of meeting the problems of maternal mortality.

The following is quoted from the last report of the Obstetrical Board:

"In conclusion, we may state that the maintenance of these gains and further improvement will be a challenge to the attention to detail of those physicians remaining on the civilian scene during the war. Many hardships will be undergone both by physicians and patients, but with due diligence the gains made may be further extended in spite of difficulties. However, the Board warns that unless hospital facilities be increased the maternal mortality rate may be expected to rise."

HERBERT P. RAMSEY, M.D.

PERTINENT PARAGRAPHS

July Meetings The Medical Society's organization year began on July 1. Despite the war and its demands on physicians, a number of important projects are under consideration by newly appointed boards and committees. The 14th ANNUAL SCIENTIFIC ASSEMBLY, which is less than three months away, will receive special attention in the next few weeks.

The following meetings were held in July:

July 10	Committee on Public Policy
July 13	Committee on Public Health
July 17	Committee on Industrial Medicine
July 20	Committee on Medical Economics
July 27	Executive Board

Physicians Charged with Indifference

It is with no intention of withholding credit from a progressive medical organization that mention is made in these columns of a statement which appeared in the June issue of the *Pennsylvania Medical Journal* in an editorial entitled, "Costly Inertia." The *Journal* says:

> "Probably the most frequent charge of indifference or inertia related to the available means of adding greater breadth and enjoyment to life is laid at the door of the medical practitioner, who, concerned with advocating a periodic health inventory for everyone, notoriously fails to have any part of such tests made of his own physical equipment for the vicissitudes of his own remaining period of existence.
>
> "Now, at last, at least one county medical society proposes to do something about this. The Philadelphia County Medical Society through its Board of Directors has recently taken an advanced position. Admitting that as a profession we have long been advocating periodic health examinations, this society indicts the profession for inconsistency, and states openly that too many 'doctors who are most enthusiastic about this procedure never think of having the periodic health examination made on themselves. They know it is the means through which the lives of others are extended, but they do nothing to ensure that their own so useful lives have the opportunity to continue as long as is possible.' "

The "advanced position" taken by the Philadelphia County Medical Society is most commendable. However, there is nothing new or unusual about it. It has been recognized by many medical organizations who have declared themselves on this subject. Writing in the October 15, 1941 issue of the *New York State Journal of Medicine*, Dr. McIver Woody said:

> "Until we come to believe in the periodic examination for ourselves we cannot expect to convince our patients that it is worthwhile for them to be examined at regular intervals. Until we ourselves are willing to be examined annually by some colleague in whose wisdom we have faith and confidence, we cannot speak with real conviction on the subject."

When the Medical Society of the District of Columbia adopted a Periodic Health Examination Program on November 5, 1941, the Committee on Public Health, in its report to the Society, said:

> "A thought . . . which impressed all members of the Committee was that periodic health examinations being desirable for the general population, physicians themselves should be examined. Your Committee is heartily in accord with this view and it urges that participating physicians demonstrate their belief in this preventive procedure by having a periodic examination. Certainly there could be no more effective way of inaugurating this program."

In "Periodic Health Examination," a manual for physicians published in 1940 by the American Medical Association, the following statement appears in the preface:

> "Of far greater importance than any other cause or all other causes combined for the failure of the people to adopt periodic health examinations, *the indifference of physicians is perhaps most important.*"

It is to be hoped that medical organizations which have interested themselves in periodic examinations will without further delay devise some means by which their members can as a group demonstrate their belief in this preventive procedure by having themselves examined.

★

Medical Society Publications Commended

Two unusually attractive and informative publications have been issued in the past month by state medical societies. A supplement to the *Wisconsin State Medical Journal* entitled "Health and Food" contains a series of articles by eminent authorities on this subject. Wisconsin being a dairy state, the food value of butter and cheese among other foods is authoritatively discussed.

The Connecticut State Medical Society has recently issued a booklet entitled, "This is Medical Care in Connecticut." The format of this publication is not only attractive but with the aid of photographs gives an impressive picture of the state's health facilities. The contributions of practicing physicians are emphasized.

A chart shows that no one in Connecticut is ever more than twenty miles from a good hospital.

Both the State Medical Society of Wisconsin and the Connecticut State Medical Society are to be commended for the originality and effectiveness of these publications.

★

An Admission of Inadequacy

A bill has been introduced in Congress which would permit chiropractors to treat beneficiaries of the United States Employees' Compensation Act. In view of the efforts being made to have this legislation enacted, the following excerpt from an article entitled, "Educational Standards: A Frank Discussion by N.C.A. Director of Education," which was published in *The National Chiropractic Journal* of October 1941, is of particular interest.

> "The fact is painful and most obvious but the chiropractor is not accepted on the same plane with other professions and the reason is that we lack the cultural and educational background whch even the laborer expects to find in a professional man. This is putting it bluntly but we might as well face the fact frankly and courageously if we are to try to correct the situation."
>
> "An inspection of a number of schools throughout the country made during the past year under the direction of the Committee on Educational Standards revealed a heterogeneous and disordered scene. The survey, initiated as part of our effort to raise standards, disclosed that in fact no standard existed. Our schools presented a museum of diversity—a conglomeration of ideas, practices and prejudices as diversified as the individuals who controlled their destinies. True, three or four schools were found with satisfactory curricula and with intelligent pedagogical direction, but in general conditions were disordered and confusing. It became evident that before standards could be raised we must first have a standard."

It is difficult to conceive how under these circumstances legislators would vote favorably upon the proposed legislation. Certainly those entitled to medical care under the United States Employees' Compensation Act should receive treatment at the hands of those who are qualified and have been properly trained.

Rationing Medical Care

While vigorous efforts to obtain physicians for the military services continue, medical care on the home front is also receiving serious attention. For it is obvious that if the war continues for a year or more, the present manner of providing medical services for the civilian population will have to be modified. In other words, there will have to be rationing of medical care just as there is of goods.

In looking over publications received at the Medical Society's office, one finds that this subject has received consideration in various parts of the country. For example, Dr. Charles Rombold, President of the Sedgwick County (Kansas) Medical Society, writes in his Society's *Medical Bulletin* as follows:

> "How will your personal medical care be altered in 1943?
>
> "Instead of house calls for colds in 1941—hospital treatment for pneumonias in 1943.
>
> "Instead of reducing diets in 1941—treatment of dietary deficiencies in 1943.
>
> "Instead of comforting of neurotics in 1941—psychoanalysis of psychosis in 1943.
>
> "Instead of consoling over-anxious parents, grandparents, uncles and aunts in 1941—the careful, quick opening of infected ears in 1943.
>
> "Instead of face lifting operations in 1941—emergency appendix operations in 1943.
>
> "Instead of the treatment of corns in 1941—the reduction of fractures in 1943.
>
> "Instead of punctual office appointments in 1941—await your turn in the waiting room in 1943.
>
> "Instead of the leisurely personal practice of the art of medicine in 1941—a clinic-like accurate personal rapid practice of the science of medicine in 1943."

The Medical Society of the County of Westchester (New York), which is always alive to important issues of the day, has taken cognizance of this problem through its Medical Preparedness Committee which recently adopted the following resolution and transmitted it to the gasoline rationing authorities of the county, state and nation.

> "WHEREAS, the President of the American Medical Association, Dr. Frank H. Lahey, is quoted in the press

as having declared that the civilian population of the United States will have to expect a rationing of medical care, due to the requirements of the armed forces for physicians, and

"WHEREAS, the proper use and conservation of each civilian physician's time is an essential factor in maintaining adequate medical care for the civilian population, and

"WHEREAS, severe and inflexible restriction of gasoline is causing many patients to summon the physician to their homes—causing an unnecessary expenditure of the physician's time—for services which should and ordinarily would be rendered in the physician's office, and

"WHEREAS, the transportation of a patient to a physician's office or to a clinic for necessary medical care should not be considered in the category of pleasure driving, therefore, be it

"RESOLVED, by the Medical Preparedness Committee of the Medical Society of the County of Westchester, that a petition be hereby addressed to the appropriate gasoline rationing authorities requesting that a system of special allowances be developed to permit automobile operators to replenish gasoline consumed in the transportation of patients to and from physicians' offices, clinics and hospitals for necessary medical care."

The *Nassau Medical News*, official publication of the Nassau County (New York) Medical Society, comes up with these suggestions for conserving the supply of medical care:

> "First, we must do our best to keep well; second, we must do everythng possible to conserve the doctor's time; third, we must learn to take care of ourselves and our sick families at home under the doctor's supervision, but with not too many doctor visits."

The only comment which can be made in regard to this matter, in so far as the District of Columbia is concerned, is that rationing of medical care will undoubtedly be necessary before the war is over. One suggestion which has been favorably received is the proposal to establish medical centers at strategic points in the city so as to make it possible for physicians to serve greater numbers of patients more promptly and with greater efficiency, at the same time conserving gasoline and tires. There can be no doubt that in the event of a long war, urban centers will have to resort to some such arrangement. Incidentally, it is interesting to speculate what effect these adjustments will have on the future of medical practice.

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Our Army in Good Health

Those who have been concerned about the health of our Army should be encouraged by a report which appears in the May 1942 issue of the *Statistical Bulletin of the Metropolitan Life Insurance Company.* The *Bulletin* reports in part as follows:

> "Except for certain special situations, the record for the troops here at home is probably a good index of conditions in the Army as a whole. The statistics given in this article are largely based on admissions to 'sick report,' separately for disease and for injuries. In judging the current record, as compared with the recent past and with the earlier record of our small peacetime Army, one must keep in mind that the continuing stream of new men into the forces brings with it a very important health problem in that some men, more particularly those from rural areas, are for the first time exposed to certain common germ and virus diseases, such as the principal infectious childhood diseases. The importance of this in the total disease picture is more or less related to the proportion which newly inducted men bear to the total in service. Another factor which tends, temporarily at least, to raise the incidence of sickness is that many of the men are engaging in activities far more strenuous than in their civilian life.
>
> "Fortunately, the past winter has been free from any serious epidemic, such as the influenza outbreak of the winter of 1940–1941. Primarily as a consequence of this, the admission rate for illness this past winter was far lower than in the preceding year. For the period from December 1941 through April 1942 the rate was about 720 per 1,000 or just about half the figure of nearly 1,450 for the corresponding period of 1940–1941. Another factor in this general improvement in the sickness rates is that the proportion of new men to the total in service, while still high, has been progressively smaller. Recent admission rates for disease compare not unfavorably with the five-year averages in our small peacetime Army during 1936–1940. While the current rates are generally somewhat higher, this must be judged in the light of the circumstances already noted which tend to raise the rates in a force consisting so largely of unseasoned troops. There must also be considered the definite policy of encouraging soldiers to report illnesses, however minor,

in order to prevent complications and in order to control the spread of communicable disease."

"By the very nature of Army life, the risk of injury from accidents is high. Admission rates to sick report for this cause have been comparatively favorable in recent months, probably because in the early part of their training period most of the men in our rapidly expanding Army have relatively little contact with mechanized equipment or heavy weapons. The death rate, also, from accidental injuries has tended to fall below the average of recent years. While, however, such injuries usually account for only one sixth of the total admissions to sick report, they are responsible for a majority of the deaths, even in peacetime. Last year, deaths from injuries were twice as many as from disease. The Army has been keenly aware of its accident problems, and long ago developed a thoroughgoing program to control this major source of disability and death."

"The highly favorable records of mortality from disease and injury last year both contributed to the all-time low death rate from all causes recorded in 1941 for troops stationed in the United States. This rate was approximately two per 1,000, or about 25 per cent better than in 1940, the previous minimum, and at least 40 per cent below the five-year average of 1936–1940.

"We have as yet only the merest glimpses of health conditions among our troops abroad. But we can be certain that these men are getting the best care that can be given them under the conditions, whether of active fighting or of preparation for it, that prevail in the areas where our soldiers are located."

★

Nursing Situation Acute

The Interprofessional Conference held on June 25 was devoted to a discussion of the acute shortage of nurses in Washington. Representing the nurses were Miss Annabelle Petersen, President of the Graduate Nurses' Association, Miss Edith M. Beattie, Executive Secretary, and Mrs. Elizabeth D. Coleman, Registrar. These officials reported that efforts were being made to obtain additional nurses and to utilize to the fullest extent present facilities.

Suggestions which the Conference believed had merit were:

1. Hospitals must pay enough to attract graduate nurses.
2. Additional students must be enrolled in nurses' training schools.
3. Twelve-hour duty must soon be substituted for eight-hour duty for the duration.
4. Publicizing the need for nurses would be helpful.
5. Reduction in luxury nursing is essential.

Those present at the Conference agreed that the organizations represented could render valuable assistance and that the problems involved should be presented to the respective groups.

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"Doctor's Dilemma"

Although criticism of the organized medical profession is not heard as frequently as in the past, disapproval is still voiced on occasion. Coming to the defense of the profession, George M. Levitas of Westwood, New Jersey writes in the July 5 issue of the *New York Times* as follows:

"In war as in peace the medical profession is a target of attack from all social agencies which appear displeased with the social order. During peace the poor man does not get enough medical service, and in war the Army is not sufficiently staffed with medical personnel. Editorial comments and official notices caution the doctor to forget 'business as usual.'

"Officer's pay is offered as justification for the termination of civil activity and transfer to military life; this often disregarding the ordinary exemptions permitted by the Selective Service Act. While by innuendo the patriotism of the physician is challenged, it is significant to note that the American Medical Association is indicted as being a 'trust in restraint of trade.'

"The Court of Appeals of the District of Columbia is quoted in your columns of June 16 as stating: 'The better educated laity of today questions the adequacy of present-day medicine.'

"(In view of the demands upon the medical profession by the armed forces, this is rather an indictment of the intelligentsia.) 'Their challenge finds support from substantial portions of the medical profession itself. The people give the privilege of professional monopoly and the people may take it away.'

"Not being a lawyer, it is very difficult to follow a line of thought which permits the people to take away the privilege of professional practice when the people have done nothing to supply the knowledge which makes that practice possible. The practice of medicine requires

(*Continued on page 330*)

War Section

ARMY HOSPITAL NAMED FOR WASHINGTON PHYSICIAN

Under construction at Chickasha, Oklahoma is the Borden General Hospital, named by the Surgeon General of the United States Army for the late Dr. William Cline Borden, eminent Washington physician and educator. Well known to hundreds of physicians throughout the country as Dean of the George Washington University School of Medicine, Dr. Borden rendered outstanding service to the Army Medical Corps.

From the time of his graduation from Columbian College, now George Washington University, in 1883, when he was commissioned Acting Assistant Surgeon in the United States Army, Dr. Borden never relinquished his interest in military medicine. Many advances from the 1880's until World War I were due to his foresight and unusual ability. During his early years in the Army he was assigned to posts in the Indian country where he had an opportunity, of which he took full advantage, to study conditions among the natives. This brought him wide recognition. Later he devoted much of his time to investigation of the X-ray. He wrote the first textbook to appear in this country on "The Use of the Roentgen Ray."

Dr. Borden ardently advocated the establishment of the Army Medical Center which for many years was known in Army circles as "Borden's dream."

Lieutenant Colonel Daniel L. Borden, Medical Corps, United States Army, Past President of the Medical Society of the District of Columbia, wrote a colorful biography of his father which appeared in the MEDICAL ANNALS for September and October 1936. In it he revealed, as few sons are capable of doing, the qualities which made the senior Dr. Borden one of the foremost physicians of his time.

Few honors have been more merited than that which has come posthumously to Dr. William Cline Borden.

REGISTRATION OF DIABETICS

On May 19, 1942 Dr. John A. Reed, Chief Medical Officer of Emergency Medical Service for Civilian Defense in the District of Columbia, addressed a letter to the Secretary of the Medical Society of the District of Columbia, in which he raised the question of protection of diabetic patients during air raids because of possible failure to secure ample insulin for their needs. He suggested that diabetic patients be registered in the offices of their physicians, at one of the hospitals, or the office of the Medical Society. Their needs could then be made known to the Emergency Medical Service which would see to it that a supply of insulin necessary to maintain all diabetics in the District of Columbia for at least a week was stored and ready for use in an emergency.

The Society's Executive Board, to whom this matter was presented, approved Dr. Reed's suggestion and instructed the Secretary to proceed with the proposed registration. Without exception the hospitals agreed to assist in every way possible. Under date of July 1, 1942, a communication went forward to members of the Medical Society requesting their coöperation. Enclosed were sample registration cards on which each patient's needs could be recorded. Physicians as well as hospitals were asked to send these cards to the Medical Society's office where the information would be tabulated.

Physicians were also requested to urge their diabetic patients to carry identification cards so that in the event of serious injury, they might receive proper treatment without delay. It was explained that a blank card could be used for this purpose, on which should be typed the name and address of the patient, the name and address of the patient's nearest relative, the name of his physician, and the patient's diet and dosage of insulin.

The Board hopes all physicians will see to it that their patients register or if they are in possession of the necessary information, that they will complete registration cards and forward them to the Society's office immediately. Patients preferring to do so can register at the nearest hospital.

STATE OCD MEDICAL OFFICIALS COMMISSIONED

To facilitate the emergency medical and hospital program now being developed by the Medical Division of the Office of Civilian Defense and the U. S. Public Health Service, physicians who are State and deputy State chiefs of Emergency Medical Service in most of the coastal States have now been commissioned in the Public Health Service Reserve so that they may exercise both State and Federal responsibilities. Where a State chief of Emergency Medical Service is unable to give full time to this activity, his commission is to remain on an inactive status and he is provided with a deputy commissioned in the active reserve who is called immediately to full-time service. In some cases, State chiefs have been appointed consultants in the Public Health Service.

These officers will have as their first duty the stimulation and guidance of local chiefs of Emergency Medical Service in the organization of local casualty receiving hospital and field casualty services. In addition to these functions, they will serve as responsible agents of the States and of the Medical Division of the Office of Civilian Defense and of the Public Health Service for the organization of emergency base hospital facilities and personnel.

In collaboration with State hospital officers, who are now being appointed in coastal States, the full-time Emergency Medical Service chiefs and deputy chiefs will plan the number, size, location, staff and equipment of Emergency Base Hospitals. Another duty of these officials will be to determine, in collaboration with the local military and the State evacuation authorities, the lines of evacuation and means of transport of civilian casualties and other hospitalized persons from local casualty receiving hospitals to Emergency Base Hospitals. In addition, these officers will review and certify bills to be submitted to the Public Health Service for payment for the hospital care of civilian casualties.

AMENDMENT TO TIRE RATIONING REGULATIONS

An amendment to the tire rationing regulations, which tightens requirements in some respects and extends eligibility for tires to certain automobile users heretofore not provided for, became effective July 1, 1942.

The amendment does the following things:

1. Requires that a vehicle operated by a physician, surgeon, farm veterinary or practicing minister, to be eligible for tires and tubes, must be used "exclusively" for professional services or religious duties instead of "principally" as heretofore.
2. Makes licensed chiropractors and osteopaths eligible under the same conditions as apply to doctors of medicine.
3. Extends the eligibility of ministers to "any religious practitioner qualified to administer to the religious needs of the members of a congregation."
4. Changes the designation of nurses eligible for tires from "visiting nurse" to "public health nurse."
5. Extends eligibility for recapped or obsolete new tires to public school officials and teachers for necessary transportation between schools.

The eligibility standards for doctors and ministers have been changed to require that applicants must show that the vehicle on which a tire or tube is to be mounted is necessary because there is no other practicable means of transportation. Heretofore, the requirement was a showing that the car was needed and used in making professional calls. Even under the new standards, however, if it is necessary for the applicant to answer emergency calls as a part of his professional practice, he may be issued a certificate to enable him to use his car between his home, his office and hospitals.

In making osteopaths and chiropractors eligible under the same conditions as apply to physicians, OPA recognized that there are substantial numbers of people who rely solely on the treatments of such practitioners.

The term "public health nurse" instead of "visiting nurse" was adopted to define more accurately the type of nursing service that makes an applicant eligible. Eligibility is not extended to any group not covered heretofore. The new term includes school nurses employed by boards of education for work with school children, visiting nurses employed by groups such as public health nursing associations, health department nurses, county nurses and industrial nurses, all of whom are employed for the purpose of making nursing or inspection calls for such agencies.

By the change in the section dealing with ministers, eligibility is extended to qualified practitioners of religious groups, such as the Christian Science Church, under the same requirements as apply to other ministers.

Public school officials and teachers are given eligibility for recapped tires or obsolete new tires only when they need automobiles to get them from one school to another in areas where there is no other practicable means of transportation. The vehicles must be used principally for this purpose or other eligible purposes. Certificates will not be issued to any teacher or official whose duties are performed wholly at one school, as the purpose of the amendment is to make tires available to teachers who conduct classes in several schools, and to supervisors who cannot meet the requirements of their positions without them.

PROTECTION AGAINST GAS

Under date of June 9, the Office of Civilian Defense issued an operations letter dealing with personal protection against gas. The letter states that if people will remember a few simple facts, they will have no unreasonable fear of this agent. The text of the letter is as follows:

War gases stay close to the ground, for they are heavier than air. To get out of a gassed area, simply walk against the wind or go upstairs.

Gas is irritating to the eyes, nose, lungs or the skin, but it is usually harmless if one does not become panicky but promptly leaves the gas area and cleanses oneself. A soldier must put on a mask where it is necessary to remain in the contaminated area, but a civilian can go up on the second or third floor and ignore it if the windows are kept closed.

If the gas should get on the skin, one can prevent it from doing much harm by sponging it off as quickly as possible with a piece of clothing, such as a handkerchief, and applying some neutralizing substance, followed by a thorough bath, preferably a shower, with common laundry soap and water.

If one is indoors, stay there with doors and windows closed, and go to the second or third story. Stay out of basements. Turn off the air conditioning, and stop up fireplaces and any other large openings.

Some gases are spread as oily droplets which blister and burn the skin and eyes. If one is outside when gas is used, do not look up. Use clothing or a handkerchief to blot drops of liquid from the skin and throw the contaminated cloth away. Do not rub, as rubbing will spread the liquid. Then go to the nearest place where one can wash immediately with soap and water and cleanse oneself in the following manner:

Remove all outer clothing outside the house, since gas can be transmitted to others from contaminated clothing. Put it preferably in a covered garbage pail.

Apply one of the following effective household remedies to the part of the skin that has been contaminated: chlorox or similar household bleach (for mustard); hydrogen peroxide (for lewisite); paste or solution of baking soda if no peroxide or bleach is available. If one does not know the gas, use both peroxide and bleach. Keep bleach and peroxide out of the eyes. Do not waste time looking for these remedies; bathe immediately if they are not at hand.

After entering the house, wash the bleach or peroxide from the hands with laundry soap and water and then wash the face. Remove the underclothing, place it in a covered garbage pail and enter the bathroom.

Irrigate the eyes with large amounts of lukewarm 2 per cent solution of baking soda (1 tablespoon to a quart of water) or else with plain water. Use an ordinary irrigating douche bag or an eye irrigator. If one does not have these, let plain warm water pour into the eyes from the shower, washing them thoroughly. Do not press or rub the eyes.

Lastly, take a shower, using laundry soap and hot water.

If the nose and throat feel irritated, wash them out also with baking soda solution.

If the chest feels heavy and oppressed, if one has any trouble breathing or if cigaret smoke becomes distasteful, lie down and stay perfectly still until a doctor comes.

If blisters develop, do not break them, and call a doctor.

Remember:

Soldiers require gas masks because they must remain in the contaminated area. Civilians can get out of the gassed area or get above the level of the gas, where they do not need gas masks or protective clothing.

Injured persons who are gassed require decontamination before they can be admitted to hospitals. All other civilians can best prevent any serious injury by promptly helping themselves in the manner outlined, using a kitchen or bathroom, laundry soap and water, and a few materials found in every household.

SOME WARTIME PUBLIC HEALTH PROBLEMS IN SUBURBAN WASHINGTON

Ralph G. Beachley, M.D., Dr. P.H.
Director of Health and Welfare, Arlington County, Virginia

Public health problems in any large metropolitan area where vast defense activities are being carried on of necessity bear a great similarity. Consequently, the conditions found in Arlington County are not unlike those of neighboring counties in both Maryland and Virginia and, likewise, compare in many respects to the counties and suburban areas bordering other large cities of this country, particularly those along the Atlantic and Pacific seaboards.

Ordinarily, municipal services, such as water, sewerage, trash and garbage collection, and other public utilities, are gradually developed in proportion to the normal growth of the community. When such growth is suddenly increased by a great influx of people, it throws a heavy burden on all types of municipal services. Thus, the public health department comes in for its full share of extra work.

History

Arlington County, which is the third smallest county in the United States, comprising only 24 square miles and lying just across the river from downtown Washington, has had a phenomenal growth in the past ten years. The population during that period has more than doubled. It is estimated that about 85 per cent or more of the wage-earners of this area are employed by the Federal Government.

The county originally was granted by the State of Virginia to the Nation to form a part of the District of Columbia. However, in the early days of the Republic it was thought that it would be of no use to the District and, by an act of Congress, it was returned to the State.

Arlington County has the distinction of being the first county in the United States to adopt the county-manager form of government, and has been considered by many communities in the country a laboratory of county managership in view of the many progressive steps it has taken.

The beginning of the county's remarkable growth probably can be said to date from the installation of a very modern county water and sewer system, the water supply coming from the same source as that of the District of Columbia. This, coupled with the fact that downtown Washington is easily accessible to the residents of Arlington County, has made it an ideal suburb of the District of Columbia.

The population of Arlington County in 1930 was reported as 26,615. It is estimated that the present population is approximately 80,000.

COMMUNICABLE DISEASE CONTROL

The foremost responsibility of the Arlington Health Department is the control of communicable diseases. With people moving into the county from many parts of the world and from every state in the Union, this is a real problem. However, the Health Department has been highly successful in keeping many communicable diseases which are prevalent in other parts of the country at a minimum.

Although no cases of smallpox have developed in the county for many years, every child entering school must present satisfactory evidence of vaccination. Parents are urged to take their children to the family physician for this service. However, those applying to the Department are given this service practically without charge.

There was only one case of diphtheria in the county during 1941. In no small part, this was due to the intensive educational program of the Health Department and the medical profession, which urged the importance of early immunization against diphtheria. The Department also carries on a county-wide immunization program in the spring and fall, offering free immunization of children against this disease. Although immunization has, to a large extent, eliminated diphtheria from the county, there is the ever-present danger of the disease because of the great number of people moving into this area.

There were 39 cases of scarlet fever reported during 1941. In all instances proper quarantine regulations were put into effect at once.

The two most important problems confronting the county health authorities, in so far as communicable diseases are concerned, are tuberculosis and syphilis. Arlington County is fortunate in having one of the most active tuberculosis associations in Virginia. The association coöperates with the Health Department in every way possible and maintains X-ray apparatus for diagnostic purposes. A part of the case-finding methods in respect to this disease is the annual tuberculin testing of high school pupils which is followed by an X-ray examination of the chest of those found positive. Recently, the Health Department with the assistance of the local tuberculosis association took chest X-ray plates of about 900 food handlers.

TRAILER CAMP

With the construction of the new War Department building in the lower part of the county, the Government found it necessary to demolish several hundred houses occupied by about 500 negroes, who were moved to a nearby trailer camp. Since the construction of the camp, the Health Department has been carrying on an intensive public health program among these individuals, which includes an examination for tuberculosis. The motor corps of the local Red Cross has been of great assistance in transporting these trailer campers to the health center where chest X-rays have been taken.

VENEREAL DISEASES

Like tuberculosis, venereal diseases present a major communicable disease problem. As is well known, this type of infection is both a community and military problem in this area. The Health Department with the assistance of the Social Hygiene Board conducts weekly clinics, free treatment being provided persons found to be infected.

Arlington County is included in the Central Tabulating Bureau of the United States Public Health Service, which is a clearing house for contacts of individuals contracting a venereal disease.

The Health Department has assisted in the examination of Selective Service registrants and those found to have a venereal infection are reported to the Department. Proper follow-up measures are put into effect to bring these men under treatment.

As a part of the procedure in combatting syphilis, the Health Department distributed free to all physicians anti-syphilitic drugs and sterile water for the treatment of patients under their care.

The marriage examination law in Virginia, which was adopted two years ago, operates under the direction of local health departments. This has brought to light many cases of venereal disease.

PNEUMONIA

During the year, 31 cases of pneumonia were reported to the Department. New and improved public health measures have recently been developed in Virginia to reduce the mortality from this disease, such as the typing service and the distribution of serum, for which there is no charge if the patient is unable to pay. Sulfathiazole is also provided where indicated.

MATERNITY AND INFANT HYGIENE

It is interesting to note that about 95 per cent of the infants born to Arlington County mothers are delivered by physicians in Washington hospitals. However, there is still one midwife who practices in the county. The Health Department has developed a prenatal clinic where women who are attended by this midwife may come for both prenatal and postnatal examination and advice. The clinic is operated by one of the physicians in the county. A colored prenatal clinic is also conducted by a colored physician assisted by a colored public health nurse.

CHILD HEALTH

As a further protection to the health of children in Arlington County, a group conference, which might properly be called a "Mothers' Consultation Conference," is held weekly in each of the health centers with a physician and a nurse in attendance. At these conferences, immunizations against such diseases as smallpox, typhoid, etc., are offered, as well as the Schick test for diphtheria and the tuberculin test.

SCHOOL HEALTH PROGRAM

Each year the Health Department urges that all children entering school receive a physical examination by a physician. It also coöperates with the Parent-Teachers' Association in the Summer Round-up when preschool children are examined and vaccinated. Mothers are requested to be present at these examinations, and the possible correction of the defects found are discussed at that time. Public health nurses, in many instances, do follow-up work to interpret the physicians' findings to the parents in the home and urge that the correction of defects be made as early as possible.

The increase in population in the county has thrown an additional burden on the school authorities, especially in the construction of adequate buildings and teaching facilities. About two years ago the school authorities employed a school physician and a nurse to carry on intensive health protective measures among the school children. The duties of the school physician are to assist the Health Department in the control of communicable diseases among the children and to conduct physical examinations. The report of the result of the physical examination is sent to the parents, and they are urged to have any defects corrected as soon as possible.

SCHOOL DENTIST

For some years the county has engaged a school dentist who is employed on a year-round basis. He confines his activities to corrective dentistry among the children during the school year and on the preschool children during the summer months. This service, likewise, has also increased because of the enlargement of the school population.

CRIPPLED CHILDREN'S SERVICE

Coöperating with various agencies, such as the local chapter of the Infantile Paralysis Foundation and the Rotary and Kiwanis clubs, the Health Department has been active in the field of crippled children's service. Clinics are conducted monthly under the direction of a specialist in this branch of medicine. He is assisted by public health nurses, who do the follow-up work in the home, and a physical therapist. The expansion of this service to meet the growing needs of the county was made possible by an appropriation from the Infantile Paralysis Foundation and the State Department of Health.

MILK CONTROL

Arlington County has always maintained a high grade of milk inspection and is fortunate in having about 95 per cent of the milk pasteurized. Close coöperation is maintained with the Health Department of the District of Columbia, as the dairies in Washington sell milk in Arlington County and some of the Arlington County dairies deliver milk in the District.

FOOD CONTROL

All food stores and restaurants are inspected monthly, and frequently twice a month, by a trained Health Department employee. They are rated as to cleanliness and laboratory examinations are made when indicated. A card issued by the Health Department must be placed in a prominent place in the store or restaurant. The inspection of food establishments requires constant supervision. While exceptions might be found, the stores and restaurants and other eating establishments in this county are far above the average.

For the past three years the Health Department has conducted physical examinations of the employees of all eating establishments, barber shops and beauty parlors, at which time a blood test is taken for syphilis. During the past year, a chest X-ray has been added to this service. Those individuals found to have the disease are placed under treatment either with a physician or in the Health Department clinics.

DISTRIBUTION OF BIOLOGIC PRODUCTS

Certain biologic products are kept in the Health Department offices for distribution to physicians at all times; they include typhoid vaccine, smallpox vaccine, diphtheria Schick testing material, toxoid and antitoxin, tuberculin testing materials, tetanus antitoxin, pneumonia sera, Pasteur treatment for rabies, and Rocky Mountain spotted fever vaccine.

PUBLIC HEALTH NURSING

Probably no other individual in the community feels the effect of the increase in population more than the public health nurse. She is the liaison officer between the Health Department and the citizens. It is the public health nurse who brings the benefits of public health procedures to the population as a whole. In addition to the public health nurses, there is the staff of the Instructive Visiting Nurse Association. Both of these agencies have been greatly overtaxed. The Bureau of Nursing Service maintains a register of nurses who may be employed for duty when needed in the home.

GENERAL SANITATION

In addition to food, milk, water, and plumbing inspections, there are many types of inspection which the Health Department is called upon to make, such as overflowing septic tanks, surface drainage, trash, garbage and scavenger services, and all types of nuisances.

LABORATORY SERVICE

The Arlington County laboratory is in many ways unique; first, because it is one of the few laboratories in the country wholly maintained and supported by a county and, second, because it is one of the few laboratories combining the work of a public health nature with that of sewage treatment. It is one of the finest equipped small laboratories in the country. It has a two-fold purpose, to aid the health officer in the detection and control of communicable disease and to aid the physicians of the county in making diagnoses. The character of the work of this division is confined as much as possible to that of a public health nature. Purely clinical examinations, such as chemical analyses of blood, urine, tissue pathology, etc., are not encouraged. The demand for laboratory service has increased steadily and, during the past year, examinations of Selective Service draftees have been added. At present the laboratory is running between 400 and 500 specimens of this nature a month.

NUTRITION

Under wartime conditions it is highly essential that the people be acquainted with the principles of nutrition and proper feeding in the home. The Health Department is constantly disseminating information along this line, and various members of this staff speak before classes in home hygiene on this topic.

SELECTIVE SERVICE EXAMINATIONS

The staff of the Health Department has cooperated with the local physicians in charge of the Selective Service examinations. Several of the staff assist at the time of the examinations, and the laboratory has been designated by the State to do the serologic and other laboratory procedures for all Selective Service examinations in the counties in Northern Virginia.

CIVILIAN DEFENSE

The Health Department staff has been closely associated with the Emergency Medical Service under the Office of Civilian Defense, and the members of the Health Department staff have been assigned to their respective duties in this field, such as control of water supplies, establishment of emergency base hospitals, first aid stations, laboratory examinations, conducting of classes in first aid and home hygiene, assisting at decontamination centers, etc.

The Health Officer has recently been appointed Assistant Chief Medical Officer of Emergency Medical Service for the Metropolitan Area of Washington.

HOSPITALIZATION

Since Arlington County has no hospital of its own, it must depend on the hospitals in the District of Columbia and certain State hospitals for patients who need this type of service. The Hospital Board in Arlington County, which has been in existence for some ten years, is in possession of a tract of land which was purchased for the erection of a hospital some years ago. Application has been made to the Public Works Administration for a grant of sufficient funds to build a 200-bed hospital. The construction of this hospital would fill a much needed service.

HEALTH DEPARTMENT EQUIPMENT

The Health Department has offices in the Court House and in three strategically located health centers, where its various activities are carried on. Recently, application has been made to the Public Works Administration for a grant for the construction of an adequate health department building.

SUMMARY

The problems confronting a health officer in a suburb of a city the size of Washington, particularly in view of the large concentration of both troops and individuals, are many and varied. It is the duty of a health department and its staff to protect any community, in so far as possible, from the spread of communicable diseases and to maintain the health of the population at as high a level as possible. This can best be done by prompt and efficient control of communicable diseases among adults and school children, the maintenance of adequate clinical service for indigent patients, the teaching of nutrition, the protection of a safe milk and water supply, the inspection of food and all places handling food for retail sale, the safe disposal of sewage, and the maintenance of an efficient scavenger service and trash and garbage collection service.

There should be an adequate staff of public health nurses both for public health procedures and bedside nursing. Adequate hospital facilities should be established. The health department staff should assist in hospitalizing those people who are unable to pay for this type of service. And, finally, there should be close coöperation between the health department and the volunteer agencies in the field of public health and preventive medicine, as well as between the health departments of nearby counties and cities.

NEWS AND PERSONALS

The Washington Society for the Hard of Hearing advises that the Medical Society has been chosen one of 30 selected persons or organizations in the District of Columbia which will receive a complimentary subscription of the *Volta Review* for one year. This subscription has been made possible by a donor who believes that the work for the hard of hearing will be augmented if the journal is given wider distribution. Members of the Society will find copies of the *Volta Review* on the reading shelf in the library.

The Commonwealth Fund of New York, a philanthropic foundation established in 1918 by the late Mrs. Stephen V. Harkness, announces that it is offering through the Pan American Sanitary Bureau 15 fellowships for one year's study of public health subjects or postgraduate medical courses to properly qualified persons or citizens of the other American republics. Fellowships in public health will be open to physicians, sanitary officers, technicians, public health nurses, etc. Each fellowship will provide living allowances while the holder is in the United States, travel costs, and tuition. Knowledge of the English language will be among the requirements. Application blanks are available through the Commonwealth Fund, 41 East 57th Street, New York; Pan American Sanitary Bureau, Washington, D. C.; or chiefs of American Missions in Latin America.

The Jacobi Society held its annual business meeting, May 25, at which time the following officers were elected for next year:

Dr. Leon S. Gordon, *President;* Dr. Herbert Abramson, *Vice President;* Dr. Sander E. Lachman, *Secretary;* Dr. Joel N. Novick, *Treasurer.*

Drs. Louis S. Greene and Earle G. Breeding were among the speakers at capping ceremonies for the nurses' aid volunteers of the Episcopal Eye, Ear and Throat Hospital, June 25. The ceremony was held at the Church of the Epiphany, 1317 G Street, N.W.

George Washington University School of Medicine, in accord with recommendations of the Association of American Medical Colleges, is establishing first aid courses for 150 freshman and sophomore students. The course will be presented through the Department of Surgery, and lectures will be given by certified Red Cross first aid instructors. Among the instructors are Drs. John B. Marbury, Julius S. Neviaser, William Ross Morris, Donald H. Stubbs and Alec Horwitz. There will also be a group of practical laboratory meetings under the direction of John W. Gates, Director of Instruction, Water Safety and Accident Prevention, D. C. Chapter, American Red Cross.

Georgetown University School of Medicine is offering an accelerated program of medical education which will permit the completion of the customary four academic years in three calendar years. At the summer session which began June 29, 104 freshmen were enrolled, which represented more than a 25 per cent increase over last year's enrollment.

Dr. Leland W. Parr, head of the Department of Bacteriology at George Washington University School of Medicine, has been elected to the Board of Directors of the District of Columbia Tuberculosis Association. Prior to his faculty appointment in 1932, Dr. Parr was chief bacteriologist in the research laboratory of the International Health Board of the Rockefeller Foundation in Andalusia, Alabama, and for seven years served as head of the Department of Bacteriology and Hygiene at the American University of Beirut, Syria.

CORRESPONDENCE

WASHINGTON, D. C., June 10, 1942

MR. THEODORE WIPRUD, SECRETARY
MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA
WASHINGTON, D. C.

DEAR MR. WIPRUD:

The United China Relief campaign in Washington has just been concluded as a part of a national campaign to raise funds for China.

Washington's quota in this campaign was $75,000 and it is a matter of great satisfaction that the amount raised is over $100,000.

I am writing as chairman of the committee for the physicians of the city to ask you to extend my thanks, through the Annals if convenient, to the doctors who responded so generously to this call. The response from the members of the Medical Society and others was spontaneous and very creditable to us as a group.

Very sincerely yours,
A. C. CHRISTIE, M.D.

BOOKS RECEIVED FOR REVIEW

Acknowledgment is made of the following books which have recently been received for review:

The Management of Fractures, Dislocations, and Sprains, 3rd ed. JOHN ALBERT KEY, B.S., M.D., Clinical Professor of Orthopedic Surgery, Washington University School of Medicine, St. Louis; Associate Surgeon, Barnes, Children's and Jewish Hospitals; AND H. EARLE CONWELL, M.D., F.A.C.S., Birmingham, Ala.; Orthopedic Surgeon to Tennessee Coal, Iron and Railroad Company and the Orthopedic and Traumatic Services of Employees' Hospital and to the American Cast Iron Pipe Company; Chairman, Committee on Fractures and Traumatic Surgery of American Academy of Orthopedic Surgeons; Member, Fracture Committee of American College of Surgeons; Associate Surgical Director of Crippled Children's Hospital; Attending Orthopedic Surgeon, St. Vincent's, South Highlands, Hillman, Children's, Baptist and Jefferson Hospitals. Pp. 1,303. Price, cloth, $12.50. St. Louis: Mosby, 1942.

Manual of Standard Practice of Plastic and Maxillofacial Surgery. Prepared and edited by the Subcommittee on Plastic and Maxillofacial Surgery of the Committee on Surgery of the Division of Medical Sciences, National Research Council, and Representatives of the Medical Department, U. S. Army. Pp. 432. Philadelphia: Saunders, 1942.

Collected Reprints of the Grantees of the National Foundation for Infantile Paralysis, Vol. 2. New York: National Foundation for Infantile Paralysis, 1941.

Physician's Reference Book of Emergency Medical Service. New York. E. R. Squibb & Sons, 1942.

GRAFTON D. P. BAILEY, M.D.

(1875–1942)

Dr. Grafton D. P. Bailey, a Life Member of the Medical Society of the District of Columbia, died at Doctors Hospital, May 18, 1942. He had been in ill health for the past four years.

Dr. Bailey was born in Charolottesville, Va., March 1, 1875. He graduated from National University Medical Department in 1896, and was a member of the medical faculty of National University for several years.

Dr. Bailey began practicing in the District in 1896. For the past 25 years he has practiced at North Beach, Md., where he also maintained his home. Active in state and community affairs, he served as a delegate from Calvert County, Md., to the National Democratic Committee. He was Honorary President of the Board of Trade of North and Chesapeake Beach, Inc., as well as Director of the Chesapeake Bay Fishing Fair Association.

Dr. Bailey was elected to membership in the Medical Association of the District of Columbia in 1898, and in the Medical Society in 1907. He was honored by Life Membership in the Society, January 1, 1939. He was a member of the American Medical Association.

Surviving are his wife, Mrs. Georgiana Bailey; a son, Confer G. Bailey, an attorney in Washington; and three brothers, Stuart and Edgar Bailey of North Beach, Md., and Lee Bailey of Herald Harbor, Md.

(Continued from page 299)

classes for the clinic groups where teaching includes the simple principles of maternity hygiene, the danger signals of pregnancy, and the elements of nutrition and infant care. Such instruction helps to obtain the coöperation of these women. This matter is undoubtedly a staff responsibility.

Obstetric staff conferences are an essential part of a maternity division of every hospital. The obstetric staff should feel accountable for any obstetric result which is less than perfect. It should constantly endeavor to improve that phase of practice which we term maternal and infant welfare.

(Continued from page 320)

years of preparation and years of study and more years of sacrifice for mature judgment."

"Past experience has shown that the physician has always filled the ranks in military medicine. He is a little slower in doing so today because the physician is no longer an unattached individual—he is also what may be called a small business man.

"He is indebted to some one for his long college and medical education. After graduation it is necessary for him to invest in very expensive apparatus to meet the modern demand for diagnosis and treatment. Friends of mine who have joined the Medical Corps have already been obliged to sell their equipment at great sacrifice—in some cases the equipment had not as yet been paid for.

"One hears comments about doctors being obliged to give up their 'lucrative practices.' It is rare to find a physician under 45, except specialists in large centers, who has a lucrative practice. It is well to recognize that the average physician has office hours every day and night and knows nothing of a five-day week or an eight-hour day. The income of the average physician today is less than that of a defense worker."

"Any suggestion that the medical profession is not loyal to its country or unwilling to meet the needs of the country by contributing its skilled effort and training is pure nonsense. The average physician, being accustomed to criticism from the moment he writes his first prescription, becomes immune to attack. It seems, however, unfair in any emergency to attack a time-honored profession and make demands upon its members which are not made on other citizens."

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ASPECTS OF THE CHEMICAL CONTROL OF CARCINOMA OF THE PROSTATE[*]

WILLIAM P. HERBST, M.D.

Professor of Clinical Urology, Georgetown University School of Medicine

THIS discussion concerns a very small part of the broad and extremely complex chemical control of malignancy. The clinical aspect consists of a simple trial and failure effort of several methods of treatment, which at the present time consist of (1) administration of a group of steroid chemical compounds, (2) removal of testicular substance surgically, (3) inactivation of testicular tissue by roentgen radiation, (4) nutritional influence[1] through limiting the cholesterol intake, and (5) a combination of these methods.

The fundamental chemistry of the problem involves cholesterol in many ways which we are far from understanding, but additional discoveries are rapidly being made. Cholesterol is a key substance because it is a constituent of every cell and fluid in our body. In its free form it constitutes 1.5 per cent of the adrenal, 1 to 1.5 per cent of the brain, 0.3 per cent of the liver, 0.2 per cent of the blood, 0.18 to 0.2 per cent of smooth muscle, 0.07 to 0.09 per cent of skeletal muscle, etc.[2, 3] The liver is probably concerned with cholesterol metabolism more than any other tissue and therefore potentially holds more important secrets involving this problem.[3, 4]

The following group of chemical formulae in graphic form demonstrate a similarity in structure of some of the steroid hormones to cholesterol. Among the vitamins, the D group is also quite similar (fig. 1).

The phosphatase enzymes, both acid and alkaline,[5, 6] also bear a relationship to the problem. Gutman and Gutman[7] have found that the prostate contains more acid phosphatase than any other tissue in the body. The following table shows the number of King-Armstrong units per gram of prostate at various ages and in other tissues.

Newborn prostatic tissue	4.5
4-year prostatic tissue	1.5
13-year prostatic tissue	73
Adult prostatic tissue	522 to 2284
Kidney	2.4 to 4.6
Liver	1.6 to 2.6
Duodenum	0.8 to 3.1
Vertebrae	1.0 to 4.9

Huggins et al.,[8] Gutman and Gutman,[7] Robinson,[9] Woodard,[10] and Herger and Sauer[11] have demonstrated that prostatic carcinoma is very high in acid phosphatase and that an elevation of the blood acid phosphatase content indicates either an extensive local prostatic carcinoma or osseous metastasis. Huggins et al.[8] have demonstrated that removal of the testicles or the administration of several estrogens decreases the androgen testosterone content of the blood with a corresponding decrease in the blood acid phosphatase. A decrease in the androgen and acid phosphatase in the blood is followed by regression of the original prostatic carcinomatous growth and complete disappearance of metastatic lesions involving the bones, lungs, and other soft tissues in a large percentage of patients. Huggins has reported patients still satisfactorily controlled as long as 30 months.[12] Using estradiol dipropionate or diethylstilbestrol I have observed satisfactory control as long as 24 months. Huggins demonstrated that the administration of testosterone stimulated prostatic carcinomatous cells and increased the acid phosphatase content of the blood.[8] This observation demonstrates the hazard of indiscriminate administration of testosterone to men in the cancer age.

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[*] From the Georgetown Urological Service of Gallinger Municipal Hospital.

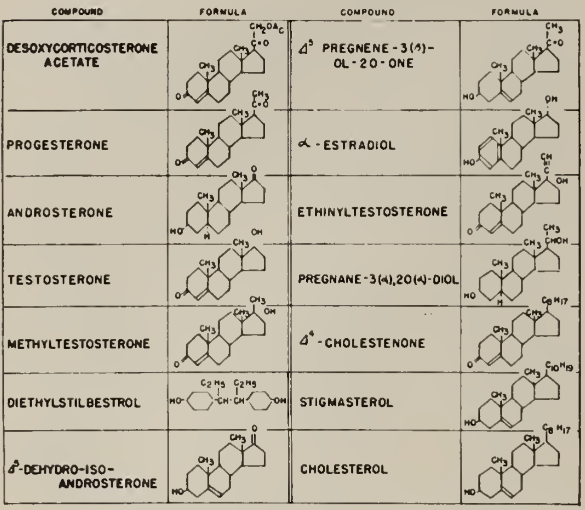
COMPOUND
FORMULA
COMPOUND
FORMULA
DESOXYCORTICOSTERONE ACETATE
Δ^5 PREGNENE-3(α)-OL-20-ONE
PROGESTERONE
α-ESTRADIOL
ANDROSTERONE
ETHINYLTESTOSTERONE
TESTOSTERONE
PREGNANE-3(α),20(α)-DIOL
METHYLTESTOSTERONE
Δ^4-CHOLESTENONE
DIETHYLSTILBESTROL
STIGMASTEROL
Δ^5-DEHYDRO-ISO-ANDROSTERONE
CHOLESTEROL

FIG. 1. Chemical formulae of some steroid hormones and cholesterol.

A promising field of related research hitherto only slightly explored is the type of tissue staining which demonstrates the chemical composition of cells. An example of this is the Gomori method of staining which shows the acid phosphatase content of the cells. The following illustration is taken from one of Huggins' studies,[13] and indicates that acid phosphatase is very abundant in the prostatic carcinoma cells and that there is none in the other cellular constituents of the tumor (fig. 2).

The clinical application of these data is most stimulating and about as spectacular as anything we have observed in the field of malignant control.

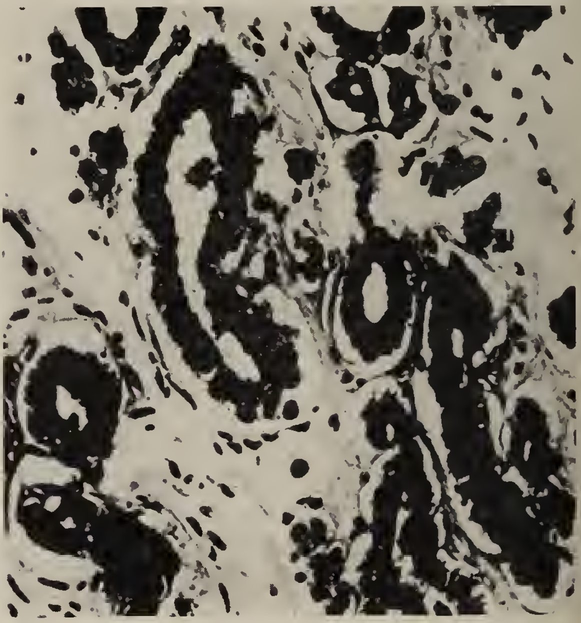

FIG. 2. Rich concentration of acid phosphatase in prostatic carcinoma cells.

In August 1940 a patient presented himself with an extensive carcinoma of the prostate and in very poor general physical condition. He was getting up 10 to 12 times a night to void, and did so with considerable dysuria and with dripping micturition. Having seen Huggins' and Clark's exhibit at the 1940 American Medical Association Scientific Exhibit, in which they demonstrated that the administration of stilbestrol definitely produced regression of the hyperplasia of senile dogs' prostates, it occurred to me that this or other estrogenic chemicals might produce a like regression of prostatic carcinoma cells. One milligram of estradiol dipropionate (Di-Ovocylin)* was injected into the deltoid region of the arm. In 48 hours the entire picture had changed. He had to void only 4 times the second night with a good stream and no dysuria. The malignant mass was softer, and he felt much better in every way. From that time until the present he has remained satisfactorily controlled, and the mass has gradually and steadily decreased in size.

Since that time more than 23 cases of carcinoma of the prostate with and without metastases have been treated. In only 2 instances has there been anything except favorable response, varying from slight to spectacular regression of the primary and metastatic lesions. The following observations are of interest, although they extend over a very short period of time and must be considered most preliminary. Five patients have been treated with estradiol dipropionate. Eight patients have been treated with diethylstilbestrol. Seven patients have been treated by castration. Four patients have been treated with estradiol dipropionate or diethylstilbestrol and castration.

In 2 cases a purpuric syndrome developed while under treatment with estradiol dipropionate. There was no reduction of blood platelets. Calcium gluconate, 15 grains by mouth after meals controlled this phenomenon in both instances.

The total amount of urine excreted was markedly decreased in many cases. This observation explains to some extent the marked reduction in nocturia, which is such a pleasing symptomatic response.

Almost instant relief of pain[3] in patients with extensive osseous metastases was observed in most instances, although there were several who were not relieved. In 2 instances increase in the dose produced relief which was not obtained with doses of 1 milligram 3 times a week. In 1 case increased dosage did not control the pain and the patient would not submit to castration, which it was felt might offer some chance of relief.

Edema of the scrotum and ankles was observed in 2 cases, but this disappeared upon temporary decrease in dosage.

In 1 case a diabetic status was markedly improved following castration, although the administration of diethylstilbestrol had not influenced the diabetic status.

The size of the testicles and penis is reduced in various degrees, and the breasts are enlarged in most instances, when estrogens are used. In 2 instances the breast involvement was unilateral. One breast was removed and histologically was found to be similar to a normal female breast.

In 2 cases in which stilbestrol failed to produce regression, and in which the process seemed to be stimulated instead of inhibited, the general sense of bodily well-being, appetite and weight were improved temporarily.

In 1 patient[14] diethylstilbestrol in 1 milligram doses controlled the pain of osseous metastases, but advance occurred from a roentgenologic standpoint. Castration then produced osseous metastatic regression. Death occurred from pneumonia. The autopsy demonstrated almost total disappearance of the prostate, but malignant cells were found in the tissue where the prostate had been. Several sections of a primarily involved vertebra failed to disclose any malignant cells. In 3 tissues from prostatic carcinoma areas, which were studied microscopically following the administration of estrogens or castration, no change of the carcinoma was recognized as being significant of alteration in appearance due to treatment. This is not conclusive, and other observers have reported marked cytologic changes (Schenken, Burns and Kahle[15]).

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* The estradiol dipropionate was furnished through the courtesy of the Research Department of the Ciba Pharmaceutical Products, Inc., and the diethylstilbestrol was furnished by the Research Department of the Winthrop Chemical Company.

Because of the fact that hormonal substances do not produce changes comparable to the dosage employed, and because large doses might well produce intensive disturbance of the endocrine balance, and because of the possibility of producing vascular hemorrhagic accidents,[16] the smallest effective dose possible should be used. With these facts in mind a dose of 1 milligram of either estradiol dipropionate or diethylstilbestrol has been given parenterally 3 times a week. Only when satisfactory relief of pain is not experienced is the dose increased, and then never more (up to the present time) than 5 milligrams a day.

Other contributions in this field are now rapidly appearing. Huggins and his co-workers have contributed fundamentally so extensively that one should read their articles in full. They are listed in the bibliography.[8, 12, 13, 17, 18, 19] They advocate castration as the best form of treatment. Wishard[20] advocates the administration of diethylstilbestrol, and in the January 1942 *Bulletin of the Indiana University Medical Center* he stated that he was treating all of the prostatic cancer patients with orally administered diethylstilbestrol with as much as 5 milligrams a day. Kearns[21] in the *Wisconsin Medical Journal* of July 1942 advocates the oral administration of ethinyl estradiol (0.05 mg. 3 times a day) and has used estrogens to the exclusion of castration in 37 cases. Chute[22] at the 1942 meeting of the American Urological Association reported that he was treating these cases by castration plus the administration of 5 to 10 milligrams of diethylstilbestrol a day.

Alyea,[23] at the same meeting, reported treating 32 cases with castration or stilbestrol or both. In 2 cases with pulmonary metastases the metastases disappeared.

Nesbit and Cummings[24] reported a 6-month follow-up study of 75 patients castrated for prostatic carcinoma at the American Medical Association meeting in June, 1942.

Munger[25] demonstrated to his satisfaction that the patients with carcinoma of the prostate, which he treated by irradiation of both the testicles and the primary growth, did much better than the cases he treated with irradiation of the prostate alone.

Lett[26] in 1905 reported results in 99 women with inoperable carcinoma of the breast who were treated by bilateral oöphorectomy, with or without thyroid administration. About half of them experienced spectacular responses comparable to what we are witnessing today in the patients with carcinoma of the prostate who are being castrated. A 5-year follow-up, however, disclosed only 1 case which was considered a cure, since there was subsequent recurrence in all of the rest. This method of treatment was discontinued but today is being reintroduced by Horsley of Richmond.

McClelland[27] of Toronto reported 2 patients with extensive metastases from testicular malignancy in which phenomenal regression of the metastases occurred following removal of the involved and uninvolved testicles at the May 1942 meeting of the American Association of Genito-Urological Surgeons.

Farrow and Adair[28] reported a case of carcinoma of the breast in a man with extensive osseous metastases, in which castration was followed by disappearance of the osseous metastases.

Kimbrough[29] has treated 10 patients, 5 with estradiol dipropionate and 5 by castration, with very satisfactory results. One patient treated with estradiol dipropionate died of a cerebral accident.

SUMMARY

Carcinoma of the prostate is at present being controlled in various degrees by changes in chemical balance by (1) irradiation of the testicles, (2) administration of estradiol dipropionate, diethylstilbestrol, diethylstilbestrol dipropionate and ethinyl estradiol, (3) castration, (4) reduction of cholesterol intake, and (5) combinations of these methods. A clinical evaluation is now under way in order that we may appraise them and utilize them to the fullest extent in conjunction with previously employed methods of direct surgical and X-ray treatment.

Further progress has as its logical objective the ability to control the vital processes of specific malignant tissue through the introduction of chemicals yet to be synthesized as a better understanding of the steroids and cholesterol metabolism evolves.

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Says many more accurate surveys of vitamin deficiency needed. A survey of approximately 400 consecutive patients admitted to the clinic wards of Stanford University Hospital with reference to inadequate diet and signs of vitamin deficiency showed that approximately one fourth had been taking an inadequate diet but the occurrence of clinical signs of vitamin deficiency was very low, Marcus A. Krupp, M.D., San Francisco, reports in *The Journal of the American Medical Association* for August 29, 1942. Of those with inadequate diets, only 11.4 per cent showed definite signs of vitamin deficiency. Only 2 instances of clinical vitamin deficiency were detected among 297 patients with adequate diets and in the entire group the incidence of definite vitamin deficiency disease was 3.1 per cent. Dr. Krupp says that the survey shows that even with a serious disease, such as cancer, deficiency disease does not readily supervene provided the diet remains adequate.

"Recent surveys of vitamin deficiency disease," he explains, "have on the whole shown a disturbingly high incidence. Most of these reports have been made by careful well trained investigators, and the results seem dependable. However, it is important to take into account the locality in which the survey is made, the particular population group and the criteria for diagnosis. Some of the statements made in the lay press, on the other hand, must be interpreted with caution, such as those claiming that 50 per cent of the employees in a certain factory in southern California had clearcut evidence of one or more sorts of vitamin deficiency. It is on this account that many more accurate surveys should be made in various parts of the country. . . ."

POSTOPERATIVE PULMONARY COMPLICATIONS*

Survey of a Three-year Period (1937–1940) at Garfield Memorial Hospital

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THE purpose of this paper is to present and discuss the clinical course and treatment of postoperative pulmonary complications in 51 patients treated at Garfield Memorial Hospital during the interval from January 1, 1937 to March 15, 1940. Owing to a number of factors, there undoubtedly were several cases of post-surgical pulmonary complications treated in this Hospital during this interval which were not obtained for this report. Approximately 40 per cent of these 51 patients were not operated on in this Hospital, but were admitted here for the treatment of their pulmonary complication. Only 1 of the 21 cases of lung abscess was a result of operation at this Hospital.

Statistical Data

It is seen from table 1 that of 51 patients 14, or 27 per cent, had atelectasis; that 21, or 40 per cent, developed lung abscess; that 8, or 15 per cent, had pulmonary infarctions; that 7, or 13 per cent, had bronchopneumonia; and that 1 had tuberculous pneumonia.

The type of surgical procedure with the highest incidence of pulmonary complications was tonsillectomy and ear, nose and throat procedures, with a total of 18 cases or 35 per cent. The next highest incidence was childbirth with 7 cases, or 14 per cent.

TABLE 1

Incidence according to type of operation

OPERATION	ATELECTASIS	LUNG ABSCESS	INFARCTION	PNEUMONIA	T. B.	TOTAL	PER CENT
Tonsillectomy and other E.N.T. operations	2	16				18	35
Herniorrhaphy	2		2	1		5	10
Lower abdominal laparotomy	1		2	2		5	9
Childbirth	4	1		1	1	7	14
Fractures		2	4	1		7	14
Dental extraction	1	2				3	6
Mastectomy	1					1	2
Chest surgery	1					1	2
Thyroidectomy	1					1	2
Nephrostomy				1		1	2
Upper and lower abdominal laparotomy	1					1	2
Cystoscopy				1		1	2
Total	14 (27%)	21 (40%)	8 (15%)	7 (13%)	1 (2%)	51	100
Mortality	3 (6%)	3 (6%)	6 (12%)	6 (12%)	1 (2%)	19	37

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* Read at the monthly staff meeting of Garfield Memorial Hospital, March 20, 1940.

Sixteen of the 21 lung abscesses occurred following tonsillectomy. Two occurred in cases of fractures.

The gross mortality for this series of 51 patients was 19, or 37 per cent.

TABLE 2

Incidence according to type of anesthesia

ANESTHESIA	NO. OF OPERATIONS	ATELECTASIS	LUNG ABSCESS	INFARCTION	PNEUMONIA
Spinal	1 (2%)				1 (2%)
Gas and ether	13 (29%)	4 (9%)	7 (16%)	1 (2%)	1 (2%)
Ether	8 (18%)	2 (4%)	5 (11%)		1 (2%)
Local	8 (18%)		6 (13%)		2 (4%)
Avertin	7 (16%)	3 (7%)		4 (9%)	
Gas	4 (9%)	1 (2%)		1 (2%)	2 (4%)
Paraldehyde	3 (7%)	3 (7%)			
Total	44 (99%)	13 (29%)	18 (40%)	6 (13%)	7 (14%)

TABLE 3

Clinical summary

COMPLICATIONS	ONSET OF SYMPTOMS	DIAGNOSIS MADE AFTER ONSET	TREATMENT IMMEDIATE	AFTER TREATMENT	DURATION	RESULT
Atelectasis	Immediate to 34 days (average 16 hours)	Immediate to 48 hours (average 5 hours)	Bronchoscopy (6) Palliative (8)	None (7) Palliative (7)	1 hour to 10 days (average 5 days)	Well—11 Died—3
Lung abscess	3 to 60 days (average 25 days)	Immediate to 40 days (average 8 days)	None (12) Palliative (8) Unknown (1)	Surgical (10) Palliative (10) None (1)	14 days to 30 years (average 13 months)	Well—8 Improved—8 Poor—2 Died—3
Pulmonary infarction and embolism	9 to 60 days (average 22 days)	Immediate	Palliative	Palliative	15 minutes to 30 days (average 1 hour)	Well—2 Died—6
Bronchopneumonia	8 hours to 60 days (average 24 hours)	Immediate to 24 hours (average 12 hours)	Palliative	Palliative	3 to 28 days (average 10 days)	Well—1 Died—6
Tuberculous pneumonia	3 days	Immediate	Palliative	Palliative	5 weeks	Died—1

In table 2 the complications are grouped according to the type of anesthesia given. Only 44 cases are included in this table. The other 7 cases were omitted because anesthesia was not used or was unknown. The gas-ether anesthesia gave the highest incidence, with 29 per cent of the total number. This fact may be accounted for by the far greater frequency of gas-ether anesthesia in this Hospital. Over half of the complications which occurred with this type of anesthesia were lung abscesses. Six of the 8 cases with local anesthesia were complicated by lung abscesses. Four of 7 cases in which avertin was used developed pulmonary infarcts. This occurrence is, in all probability, purely coincidental. In the 3 paraldehyde cases atelectasis developed. Complications following spinal anesthesia are not truly represented in this series, because this form of anesthesia was used much less frequently than the inhalation type. According to some authors,[1] the incidence of pulmonary complications with spinal anesthesia is greater than with inhalation anesthesias, and most agree that the incidence is at least as great.

Table 3 summarizes the clinical course of these 5 types of pulmonary complications. These data are only relative, since the accuracy depends entirely on the history obtained from the patient or from the attending physician. They do, however, reveal a few interesting points for consideration. The onset of the atelectasis was usually within the first 24 hours, whereas the onset of the symptoms of abscess formation did not flare up until an average of over 3 weeks after operation. The diagnosis of atelectasis was made in an average time of 5 hours after the onset of symptoms because these patients were all in the hospital at the time of the onset.

In 7 of the patients with atelectasis, bronchoscopic aspiration was carried out as immediate treatment with prompt relief in 4. The other 3 patients were moribund at the time of the bronchoscopy and soon died. Seven patients responded to medical treatment quite well. The average duration of symptoms was 5 days.

In the case of lung abscess the great majority of the patients had been discharged from the hospital before the onset of symptoms. There was an interval of delay averaging 8 days between the onset of symptoms and the diagnosis. This delay was due partially to the procrastination of the patient in seeing a physician and partially to the failure on the part of the physician in properly evaluating the early symptoms.

Twelve of the 21 patients who developed lung abscess received no immediate treatment. However, it must be realized that in a number of these patients the symptoms of the preceding atelectasis were either absent or minimal in degree. Only 2 of the 21 patients received bronchoscopic aspiration immediately. Thus, it is evident that the patients with atelectasis who were given adequate treatment immediately did not progress to abscess formation as frequently as those who were neglected.

Regarding after-treatment of the lung abscesses, the 3 deaths were in uncoöperative patients who refused the proper palliative treatment. Palliative treatment as here implied, in the treatment of abscess only, includes bronchoscopic aspirations, postural drainage, and general supportive measures, while surgery refers to phrenic nerve interruption, thoracostomy and Schede's thoracoplasty. Nine patients were cured or improved by surgery. Another surgical case refused proper postoperative care. Eight patients were cured or improved by proper palliative measures. The average duration of symptoms in those patients receiving proper treatment was 13 months.

Of the 8 patients who had pulmonary infarction and embolism, 3 were verified by postmortem examination, 2 had typical symptoms and no postmortem, and 3 did not have an autopsy and the diagnosis was debatable. The onset of symptoms was an average of 22 days postoperatively. The treatment was palliative. The average duration of symptoms was 1 hour for the 6 patients that died and 20 days for the 2 who recovered.

The average onset of symptoms of bronchopneumonia was 24 hours, and the average duration was 10 days. Only 1 of 7 patients recovered. Most of these were cases of terminal pneumonia in a debilitated individual.

One case of tuberculous pneumonia developed in a colored female 3 days postpartum who had previously had chronic pulmonary tuberculosis with cavitation. Anesthesia was not given, and the labor was normal and of short duration. The infection rapidly progressed, beginning the third day postpartum, and the patient succumbed in 5 weeks.

In lung abscesses, which comprised 40 per cent of the complications in this series of cases, there is still much controversy regarding the relative frequency of embolism and pulmonary obstruction as the etiologic agent. No attempt will be made to discuss the numerous factors which may favor one side or the other of this issue. Cutler[2,3] has given some very strong experimental evidence to support the embolic theory. He was able to produce lung abscess in 100 per cent of his experiments on dogs by the introduction of an infected embolus into the jugular vein. However, the proponents of the aspiration theory have considerably increased in number in recent years, as the evidence in favor of this theory has accumulated. It is highly plausible that both mechanisms play an important part in the pathogenesis of lung abscess. It is pertinent, therefore, that prophylactic precautions be taken to combat the initiation of either mechanism.

For the prevention of septic embolism, Cutler cautions the surgeon to exercise great care to reduce operative trauma and its resultant local thrombosis to an absolute minimum. He also urges the use of flawless asepsis to prevent postoperative infection. An infected wound is probably the most fertile source of a septic embolus.

ATELECTASIS

In view of the tremendous importance which atelectasis plays in postoperative pulmonary complications, a discussion which gives some of the modern concepts of this subject follows.

Definition.—Atelectasis is derived from two Greek words meaning "incomplete expansion." This word originally applied only to newborn infants but since has been extended to include a definite clinical entity in which there is collapse of the lung tissue.

Pathogenesis.—The modern concept leaves little question as to the mechanism of atelectasis formation. There are, however, still many questions relating to the ultimate etiology of atelectasis. There are 2 general types[4] of atelectasis, (1) obstructive and (2) compressive. The compressive type is seen in pneumothorax, empyema and pleural effusion. In this group, the atelectasis is of secondary importance.

The obstructive group is the one on which most emphasis is placed, since this is the type seen most frequently postoperatively. Complete occlusion of a bronchus traps the air contained in that portion of the lung. As the trapped air slowly absorbs, the lung volume and endothoracic pressure on the involved side decreases. This allows the atmospheric pressure of the contralateral side to force the mediastinal structures toward the involved lung, to pull up the diaphragm, and partially to collapse the chest wall. This obstruction may be caused in one of several ways. There may be (1) a plug formed most commonly by tenacious mucus, or by a neoplasm, foreign body, blood clot, aspirated fluid, etc. Vagal stimulation[5] with its bronchial constriction (2) may occlude a bronchus. There has been much written on the neurogenic origin of atelectasis, but except for isolated instances there is little to verify that vagal stimulation alone plays much part in the production of atelectasis. It is feasible that the neurogenic constriction of the bronchioles postoperatively and in mild shock may be a factor predisposing to atelectasis. Allergic manifestations with the resulting edema of the bronchial mucosa (3) may predispose to atelectasis formation. Wilmer[6] reported a series of 10 cases of massive collapse occurring postoperatively in allergic individuals, i.e., they had a cutaneous reaction to at least one or more protein irritant. He advised desensitization with peptone 0.3 Gm. 14 hours preoperatively. The mucous plug is by far the most common obstructive agent postoperatively. It is the immediate cause in practically all postoperative atelectasis, and, when superimposed on the predisposing factors named above, finds fertile soil and is followed by the rapid progression of the atelectasis.

Regarding the nature of the pathology present in any case of atelectasis, there are three main factors responsible: (1) location of the plug of mucus in the bronchial tree, (2) infection, and (3) the degree of obstruction by the plug.

Van Allen[7] emphasized the importance of the location of the plug. Obstruction of the main stem bronchus produces massive collapse, obstruction of a secondary bronchus causes lobar atelectasis, and obstruction of the smaller bronchi produces patchy atelectasis resembling bronchopneumonia (formerly called "ether pneumonia"). The obstruction of a lobular bronchus usually does not produce an atelectasis because of an anatomic condition not generally appreciated, namely, that the direct peripheral continuity of adjacent lobules permits the interchange of aeration, thus preventing collapse of the occluded lobule. This may account for the inconsistency occasionally observed in which there is a mucous plug found without atelectasis.

The second factor is also very important. There is always some degree of infection and inflammatory reaction present when the pulmonary drainage is interfered with, even for a brief time. The pneumococcus is almost always found as an invader in postoperative atelectasis, setting up a mild infection.[4] As the process continues unrelieved, pneumonia or abscess formation very frequently intervenes.

The third factor refers to the incomplete or ball-valve obstruction, producing emphysema by its pumping action on respiration.

Van Allen[7, 8] states that straining respiration is a predisposing factor for atelectasis and should be avoided if possible.

Henderson[9] has a remarkably enlightened point of view on the whole problem of atelectasis. He finds that the underlying cause of all postoperative pulmonary atelectasis is "abolition of tonus" of all the respiratory muscles, producing decreased intrathoracic volume and decreased respiratory excursions. This decrease in muscular tonus is presumably due to depressing effect of the anesthesia (or the psychic shock, in the instance of local anesthesia) on the central nervous system. According to this premise, spinal anesthesia, with its paralysis of the nerve impulses to the lower trunk and lower extremities, should give as high, if not a higher, incidence of atelectasis than the inhalation anesthesias. This is the case, as has been shown by many authors.[10] The vital capacity is always lowered postoperatively, and may be decreased up to 50 per cent of normal, especially in cases of laparotomy. This condition is due mainly to loss of tonus of the diaphragm and is characterized by shallow respirations, rapid pulse, and an elevated diaphragm. It is readily seen how this partially deflated lung, deprived of its remarkably effective cleansing mechanism, the cough reflex, may become obstructed by an accumulation of mucus, and atelectasis rapidly supervenes. The absorption of air is a purely physical process,[4] both quantitative and qualitative absorption taking place until it is complete. About 4 to 8 hours are usually required for enough absorption to produce severe symptoms in the dog and 12 hours for complete absorption.

When massive atelectasis is present and the lung is completely collapsed, the total blood volume of the affected lung is diminished by 25 to 50 per cent.[11] Thus it is readily seen how this added burden on the function of areation of the blood may embarrass the respiration and circulation.

Symptoms and Diagnosis.—Massive collapse is characterized by a rapid rise in temperature and pulse rate, respiratory embarrassment out of proportion to the temperature and pulse rate, and cyanosis. The facies show anxiety, yet the patient does not really look sick. There is usually pain in the involved side of the chest. The leukocyte count varies from 10,000 to 20,000. The mediastinum and apex are displaced toward the affected side. There is reduced motion and markedly diminished to absent breath and voice sounds on the involved side. The diaphragm is always markedly elevated and moves very little on respiration. Roentgenograms show elevation of the diaphragm, shift of the mediastinum, decrease in width of the intercostal spaces and opacity of the lung.[12, 13]

Partial atelectasis is seen in all degrees from minimal with no symptoms to subtotal with symptoms slightly less severe than those of massive collapse. The importance of the early diagnosis of this condition is becoming more widely recognized and frequently presents quite a diagnostic problem. Apparently the progression to abscess formation is not always in proportion to the degree of atelectasis present, so that minimal atelectasis frequently is seen to be the origin of a pulmonary abscess later. One or more of the symptoms listed for massive collapse may be present in varying degrees in partial atelectasis. The physical examination and X-ray findings change very readily from one minute to the next owing to changes in position, cough, etc. Thus the findings are difficult to evaluate. The earliest signs and symptoms are a sharp elevation in temperature the first 24 to 48 hours postoperatively and usually a rise in the pulse rate. The diaphragm is high on the affected side. There is some diminution in breath sounds but no râles. The portable or, preferably, an erect chest plate should be taken when possible to check the clinical findings.

Treatment.—Prophylactic treatment is very highly recommended as a routine postoperative procedure by all authorities. A suggested routine[14] is (1) hyperventilation with carbon dioxide and oxygen inhalations while the patient is still in the operating room, (2) elevation of the foot of the bed for 6 hours, (3) frequent shift of the patient from side to side, (4) frequent periods of deep breathing for the first 24 hours, and (5) the placing of postoperative dressings in a way not to hinder respiration. All of these measures promote pulmonary drainage, and that is the common denominator of all the prophylactic procedures. Some authors[7] recommend elevating the head to semi-Fowler's position for drainage. Scott[15] reports 2,000 major surgical cases without immediate inhalations of carbon dioxide and oxygen as having an incidence of massive collapse of 0.6 per cent, and 2,850 major cases receiving immediate inhalations with an incidence of only 0.2 per cent or one third that of the first series.

For active treatment carbon dioxide (5 to 25 per cent) plus oxygen inhalations is highly recommended by all authors checked on. The inhalations are given with a rubber mask or funnel placed tightly over the nose for 2 or 3 deep breaths every 30 to 60 minutes. The patient is turned with the affected lung up and is encouraged to cough. Sharp blows with the hand on the chest often aid in inducing coughing. The blow bottles are not effectual and should be abandoned, since they cause straining respiration. The patient should be carefully watched, and if there is no response to palliative measures after a few hours, bronchoscopic aspiration in skilled hands is highly recommended. This procedure gives prompt relief of signs and symptoms for all degrees of atelectasis.

SUMMARY AND CONCLUSIONS

In a series of 51 patients with postoperative pulmonary complications treated at Garfield Memorial Hospital during the 3-year period (1937–1940) the main features were:

1. Approximately 80 per cent of the 51 cases were due to atelectasis or septic emboli.
2. One third of the lung abscesses followed operative procedures in which local anesthesia was used.
3. Ear, nose and throat surgery, mostly tonsillectomies, preceded 33 per cent of all the complications in this series.
4. The value of prophylactic treatment and the early diagnosis of postoperative atelectasis with the immediate institution of adequate treatment is emphasized.
5. The early and adequate treatment of lung abscess permits a good response to palliative measures and may greatly reduce the duration of morbidity.
6. The average duration of symptoms of lung abscess in this series was 13 months.

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(*Continued on page 373*)

BILATERAL DERMOID CYSTS COMPLICATING PREGNANCY

Report of a Case

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DERMOID cysts complicating pregnancy and labor have been described relatively frequently in the literature, but there are few cases on record in which the dermoids were bilateral.

Report of Case

L. B., a white woman, 35 years of age, gravida 2, para 1, was seen at my office on October 25, 1941, complaining of possible pregnancy and left lower quadrant pain. Her last menstrual period was August 8, 1941 and was normal in character and lasted 4 days. Abdominal examination revealed a cystic mass about the size of an orange in the lower left quadrant, which was movable and somewhat tender. Vaginal examination showed the cervix to be soft and the uterus to be enlarged to about twice its normal size. The cystic mass seemed to be on a pedicle; it was to the left and above the fundus and easily separated from it. A provisional diagnosis of uterine pregnancy with left ovarian cyst was made, and it was decided to treat the patient expectantly.

Subsequent office visits were made on November 24 and December 11. On the latter occasion the patient was complaining of considerable pain from the cyst, stating that she had not been free from discomfort in that region for the past week.

Since the patient was close to the 4th month of pregnancy, which is thought to be the ideal time for any elective surgery when indicated, an operation was decided upon.

The patient was operated upon at Providence Hospital on December 13, 1941. The abdomen was opened by means of a low midline incision, and the left ovary was brought into view. It was found to be a dermoid cyst about the size of an orange, containing hair and considerable sebaceous material. Since dermoids are frequently bilateral, the other ovary was inspected, and a smaller dermoid cyst containing the corpus luteum of pregnancy was found. Both ovaries were removed and the abdomen closed.

She was given ⅙ grain (0.01 Gm.) of morphine sulphate every 4 hours for 48 hours and 2 mg. of progestin daily during her stay in the hospital. Her postoperative period was uneventful. Her temperature and pulse reached normal on the third day and remained so during the rest of her hospital stay. She felt fetal movements for the first time on the 7th postoperative day, and left the hospital on the 12th day in good condition.

The remainder of her prenatal period went along very smoothly. Her weight gain was from 160 to 176 lbs., her blood pressure varied from 90/60 to 118/76, and her urine was normal throughout.

She went into labor on May 28 and delivered a female infant weighing 9 lbs., 7 oz. after 6½ hours of labor. Delivery was from an L.O.A. position. Her puerperium was uneventful, and she left the hospital on the 10th day postpartem in good condition.

Examination of the tumors showed that the larger ovary measured 8 by 9 by 5 cm. and the smaller 4 by 6 by 3 cm. On opening them, they were seen to be converted into large cysts with hair and sebaceous material. The smaller ovary showed the presence of a corpus luteum.

Discussion

Dermoid cysts make up about 10 per cent of all cystic neoplasms of the ovary, and about 25 per cent are bilateral. Although they may occur at any age, even in childhood, they are most common during reproductive life.

The dermoid is a benign cystic tumor derived from embryonic cell rests in the ovary. It is characterized by a predominance of ectodermal elements, although mesodermal elements are also found and occasionally even entodermic structures. All the abnormal tissue elements are well differentiated.

They may vary in size from a pinhead to the size of a coconut. They are round or ovoid in shape with less tendency to lobulate than the cystadenoma. The dermoid nature is not definitely distinguishable on examination, but it may be suspected by the heaviness of the tumor, the thickened, whitish, opaque wall, or the presence of hardened or even calcareous nodules in the wall of the tumor.

On opening the cyst, much thick sebaceous material is revealed, together with strands of hair. There is no relation between the color of the individual's scalp hair and that contained within the dermoid. One or more teeth of the incisor or molar variety are frequently seen, and they are often embedded in sockets of a rudimentary maxilla.

Microscopically the presence of stratified squamous epithelium in the cyst wall, together with any sebaceous and sudoriferous glands, as well as hair follicles, is diagnostic. Mesodermal elements are common, especially in the form of plaques of cartilage.

Very rarely, the dermoid may undergo malignant degeneration in the form of a sarcoma or carcinoma, the latter being of an epidermoid variety.

Bilateral dermoids complicating pregnancy in which bilateral ovariotomy is performed are of especial interest because of their rarity. The available literature reveals only 51 reported cases. Andrews and Nicholls,[1] in an exhaustive review of the literature in March 1940, found 43 cases and reported a case of their own. Since then single cases have been reported by King,[2] Southward,[3] and Doyle,[4] and 5 cases by Bowles.[5]

Of historical interest was a paper by Manton[6] in 1911, in which both ovaries were removed for bilateral dermoids at the third month of pregnancy, and the patient went on to term and was delivered normally. In discussing his paper, both Baldi and Gellhorn severely criticized him for removing the corpus luteum of pregnancy and expressed great wonder that abortion did not occur. They maintained that the remaining ovary should have been resected and the corpus luteum left intact.

The present case brings up many interesting points. It shows that the corpus luteum of pregnancy can be removed after the third month, and that the pregnancy will maintain. This is due to the placenta taking over the production of estrogen and progestin, as the corpus luteum regresses. Removal of the corpus luteum of pregnancy before the placenta has formed will most likely result in abortion.

It also brings up the question as to the best method of handling ovarian cysts or tumors when diagnosed during pregnancy. When the cyst is discovered during the first trimester, many authorities advocate carrying the patient along to the fourth month and operating at that time, regardless of whether the tumor is causing symptoms or not. During the last trimester it is better to allow the patient to go to term and deliver normally, and to operate on her later, provided the tumor is not blocking the birth canal. If the tumor is causing blockage, or there is some danger of a cyst rupturing from the pressure of the fetal head during delivery, it is better to do an elective cesarean section at term.

It is my opinion that when an ovarian cyst or tumor large enough to cause symptoms is diagnosed during pregnancy, it should be removed when diagnosed, provided the patient is seen before the last trimester, for the following reasons:

1. A certain percentage of ovarian tumors are malignant, and it is impossible to elicit this fact without operation.

2. There is the ever-present danger of a cyst twisting on its pedicle, necessitating an emergency operation. This is particularly true immediately after delivery, when the contents of the uterus have been evacuated and the lax abdominal walls allow more motion of the cyst.

3. The cyst may drop down in the cul-de-sac and obstruct labor, or the pressure of the fetal

head may cause it to rupture during delivery. This is serious if the cyst is a dermoid, since its rupture will cause adhesive peritonitis.

4. The sudden release of pressure from the pedicle at the time of delivery may cause a marked dilatation or even rupture of the vessels supplying the cyst, thereby causing an intracystic hemorrhage.

5. Since the patient must be operated on eventually, it is much better to do an elective operation at the optimum time. This ideal time is between the third and fourth months, because the placenta is completely formed and has taken over the hormonal action of the corpus luteum. Also, the uterus is not too large and need be handled very little, and the danger of abortion is thus reduced to a minimum.

Summary and Conclusions

1. Another case of bilateral oöphorectomy for dermoids complicating pregnancy is added to the 51 cases reported in the literature.

2. The ability of the placenta to take over the complete role of the ovary after the third month of pregnancy is again demonstrated.

3. The ideal time for an elective operation during pregnancy is between the third and fourth months.

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Avoidance of constipation through drinking of water "The available data do not justify the opinion that excessive amounts of ingested water may be considered a factor in avoiding constipation," *The Journal of the American Medical Association* for July 4, 1942, says, adding, "The mode of living, habits, diet and emotional responses are probably the determining factors in the causation of constipation."

Elaborating on the subject, *The Journal* says:

"Constipation is a clinical term—loosely used—denoting a state of the bowels in which evacuations are infrequent and difficult or the volume of the stools is insufficient. Evacuation of feces is the function of the left half of the colon. A number of clinical, mechanical and reflex (gastrocolic) factors are recognized as contributing to its proper function. The amount of water ingested daily is probably not a factor of any great importance in the maintenance of this function. Consumed water is absorbed principally in the right half of the colon. Insufficient fluid intake would result in a drier fecal current to the left colon. However, the dry, hard stool of the patient with constipation is due to the long overtime which the feces spend in the colon rather than to insufficient fluid intake. A certain amount of water is of course essential for body needs. From clinical experience it would not be possible to state definitely that insufficient water intake is a factor in constipation, and still less that adequate or excessive amounts have any prophylactic or curative value.

"Brown stresses the fact that many people, especially women, will drink only 2 or 3 glasses of water a day. The water intake for a person who suffers from constipation, he believes, should be about 2 liters. Adson and Bargen advise between 2.5 and 3 liters of liquids daily. A search of the literature for experimental studies on the subject reveals a cursory reference by Bastedo, in which it is told that a number of 'nondigestive' patients were made to drink 1 glass of water every hour for fifteen hours daily (almost a gallon) for one week. This regimen did not increase the bowel movements and served merely to activate the kidneys. The majority of clinicians recommend from 8 to 10 glasses of water a day for persons with constipation. Excessive amounts may be helpful in some cases."

BARBITURIC ACID POISONING

Report of an Unusal Case

T. DOUGLAS NOBLE, M.D.
Chestnut Lodge Sanitarium
Rockville, Maryland

THIS is a report of a suicidal attempt with an overdose of seconal which presented several unusual features. The carefully planned method of suicide led to difficulty in diagnosis of the cause of coma; an additional difficulty arose through a discrepancy in the results of two methods of estimation of barbituric acid in the urine; and third, the patient, despite her extremely critical condition, responded to the use of picrotoxin intravenously.

REPORT OF CASE

Mrs. C. E., a woman of 48, was admitted to the Chestnut Lodge Sanitarium on August 11, 1941 in her 4th attack of depression. She improved gradually until March 14, 1942. On that day when the nurse made morning rounds the patient was found comatose. She was cyanotic; the pupils were contracted and did not react to light. The face was drawn slightly to the left. Tendon reflexes were all absent. The plantar reflexes were normal. There was some moisture at the bases of the lungs. The heart was not enlarged. The temperature was 101°F. rectally; the pulse rate was 130, and the respiratory rate was 32. The blood pressure was 68/48. There was no evidence in the room of the patient's having taken poison. Glucose was given intravenously, and during the next 14 hours 4 doses of caffeine sodium benzoate (0.5 gm.) and 2 doses of Coramine (1 c.c.) were administered.

The patient became weaker. The temperature rose to 103.4°F. rectally and the respiratory rate to 42. A small area of consolidation was observed at the right base. The pupils became dilated and reacted to light. A lumbar puncture was done and clear fluid withdrawn.

A diagnosis of barbituric acid intoxication was made and picrotoxin administered in 6 doses intravenously, 4 doses of 3 mg. each and 2 doses of 6 mg. each. Oxygen inhalation was started and continued for several hours. A few minutes after the 6th dose of picrotoxin the patient moved her feet and legs slightly and yawned, and during the next few hours she moved around a little more.

The next morning, March 15, the patient was still comatose but continued to move her legs, swallow, and turn her head frequently. The temperature was 99.6°F., the pulse rate 100, and the respiratory rate 30; the blood pressure was 84/65. The color improved. The neurologic examination was unchanged. Because of the patient's slow emergence from coma, Metrazol, 1 c.c. (0.5 Gm.), was administered. The patient became restless after the administration of Metrazol, and this restlessness increased throughout the day.

On March 16, after a restless night, the temperature was 101°F. rectally, the pulse 118, and the respiratory rate 30; the blood pressure was 106/64. The patient was muttering, "Close the window," "I am so cold," "What is wrong with me?," "Everything hurts me so." She complained of people putting cold things into her bed, and of being too hot or too cold. She recognized some of the nurses and said it was too much of an effort to recognize others. Her enunciation was slow and labored, as though she were trying to clarify her own thinking, and her speech was thickened. The chest was clear except for a slight diminution in resonance over the right side. The pupils were slightly dilated, reacting briskly to light. The face was drawn slightly to the left. The tendon reflexes were present but slightly diminished in the upper extremities, present and equal in the lower extremities. Urinalysis showed a faint trace of albumin (which had also been present on previous urinalyses). The patient began to take fluids by mouth.

On March 17 examination of the urine for barbiturates was made. The Koppanyi test was negative for barbiturates, and the urine was also negative for chloral and for heavy metals. The temperature was 101.2°F. rectally, the pulse rate 90, and the respiratory rate 30. The patient was still semistuporous, very drowsy. She complained that everything hurt and that it was too much effort to coöoperate with the examination. There was marked hyperesthesia. Even the gripping of the hands during the examination seemed to hurt. The right pupil was definitely smaller than the left, but both pupils were regular and reacted to light. There was right facial weakness. The tendon reflexes were present in the upper extremities. The abdominal reflexes were absent on the left. There was a bilateral Babinski which was more marked on the left. The neck was slightly rigid, but there were no signs of increased intracranial pressure. The patient took fluids freely and some soft nourishment. She voided freely. In view of the negative results of the barbituric acid test, the diagnosis of cerebral hemorrhage was considered most likely, although the absence of blood in the spinal fluid and the lack of signs of meningeal irritation or increased intracranial pressure were against this.

On March 18 the patient felt better. The temperature was 99.8°F., the respiratory rate 26, the pupils were equal and reacted to light. There was right facial weakness. The tongue protruded in the midline. Tendon reflexes in lower extremities were not elicited. There were equivocal plantar reflexes on both sides.

On March 19 barbituric acid examination of the urine by the Germuth gravimetric test showed 33.6 mg. of barbituric acid per 100 c.c. The temperature was 99°F., the pulse rate 74, and the respiratory rate 26. The patient told me that on March 14 she had taken 19 capsules of seconal of $1\frac{1}{2}$ grains each, a total of $28\frac{1}{2}$ grains. She said that she had saved this up since the night of the last blackout in the middle of February, having decided then that she would commit suicide. (The amount which she had taken was a little more than had been prescribed for her since the middle of February, and it is probable that she obtained a few doses surreptitiously from other patients.) The patient said that she had taken these capsules when they were administered by the nurse and had put them under her tongue, pretending to swallow them. After the nurse had left she had removed them from her mouth and hidden them in the lining of her dress. She had waited until she had accumulated what she considered to be a sufficient amount to prove fatal and had taken them at one time, intending to leave no trace behind.

The patient convalesced rapidly from her intoxication and during the next few weeks made a gradual and consistent improvement from her state of depression. She was transferred to another hospital on May 4, 1942, greatly improved.

Discussion

In reviewing the sequence of events it is interesting to note that the patient had received practically no sedation during her stay in the sanitarium except between February 18 and the date of her attempted suicide. The nurses' notes for 2 weeks prior to February 18 indicated that the patient had slept rather well and had shown a progressive lightening of her depression. On February 19 she had complained to the doctor on duty that she was wide awake, and the doctor, knowing that the patient was not accustomed to make this complaint or to request sedation, had prescribed a dose of seconal grs. $1\frac{1}{2}$. On succeeding nights the physicians on duty had received the same request from the patient. On some of these evenings the patient seemed quite depressed and complained that she was unable to talk with her psychotherapist. The doctors on night duty, thinking that she was encountering some difficult emotional problems in psychotherapy and influenced by the fact that the drug had been prescribed on previous nights, continued to prescribe seconal. (It is clear now that the patient's disturbed periods during that time resulted from turmoil over her planned suicide.) She omitted requests for the drug for 2 or 3 evenings at a time, which helped to lower suspicion, but during the period of 27 days in which practically all of the seconal was secured 3 or 4 placebos were given without any noticeable change in the patient's sleep. Impressed as we were with the patient's complaint of difficulty in her psychotherapeutic work we failed to notice even this obvious fact.

The intensity of the patient's reaction to the ingestion of $28\frac{1}{2}$ grains of seconal was very striking. She seemed closer to death than any patient I have seen who has recovered.

It is probable that there was some idiosyncrasy to barbituric acid. The delay in the excretion of the seconal as indicated by the high concentration of barbituric acid in the urine after 5 days is striking. Usually seconal is excreted very rapidly, and when this amount of barbituric acid is found after 5 days it is probable, judging from some former observations of Dr. Germuth and me, that idiosyncrasy exists, even in the absence of kidney damage. The nature of this idiosyncrasy is undetermined, although it may be connected with the rate of detoxification in the liver.

INTUSSUSCEPTION PRODUCED BY SUBMUCOUS INTESTINAL LIPOMAS

Report of a Case

JOSEPH P. SHEARER, M.D., F.A.C.S.
J. ROSCOE CREER, M.D.
Washington

INTUSSUSCEPTION is an uncommon yet dangerous pathologic condition. Seventy-five per cent of the cases occur within the first year of life. It is the most common cause of intestinal obstruction in children and rarely is there any intrinsic or extrinsic pathologic process to account for it. In adults, however, there is usually some definite cause, such as a benign or malignant tumor of the intestine, a stricture, or a Meckel's diverticulum. Benign tumors of the bowel derive much of their importance because of their tendency to invagination.

Cases of benign tumors of the intestine are being reported with increasing frequency, but they are still sufficiently rare to warrant report of individual cases. The case to be reported is that of a submucous lipoma producing intussusception in an adult. In 5,754 consecutive autopsies performed at Cook County Hospital 9 cases of lipoma of the gastrointestinal tract were found. This series was reported by Kirshbaum.[1] In 1931 Comfort[2] made an extensive survey of the literature and reported 181 proved cases of submucous lipomata. This included his own 28 cases from the Mayo Clinic. King[3] states that only 8 cases of true solitary tumors of the small bowel were found in 44,654 laparotomies at the Mayo Clinic. These figures indicate the rarity of this condition.

The most common location is the ileocecal junction, and Boyd[4] accounts for this "because local inflammation and other sources of irritation are common in this region. Also the disparity in size between the small and large intestine favors the production of intussusception. The inversion may occur at other parts of the bowel, particularly if a polypus happens to project into the lumen."

Richardson[5] states that "the mechanism of occurrence of intussusception is not clear, although a long ileocecal mesentery and mobile cecum and ascending colon are contributing factors. It is probably produced by active and disorderly peristalsis which forces a localized constriction into the intestine ahead of it. A tumor of the intestinal wall when once pushed into a relaxed intestine may be grasped by peristalsis and carried further downward."

This telescoping of the bowel wall into itself drags the mesentery along with it and soon there is interference with the blood supply to the affected area. The resulting edema produces symptoms of strangulation and acute obstruction.

If the invagination is reduced within 6 to 10 hours of the accident, the bowel wall is usually viable. As time progresses beyond this limit the edema, fibrinous adhesions, and later gangrene of the invaginated intestine produce a condition which can be cured only by resection of the affected intestine.

Reports indicate that only 50 per cent of cases with intraluminal tumors had any symptoms referable to this condition. The tumors were found accidentally at operation or autopsy. The 4 cardinal symptoms and signs of intussusception in the infant are: (1) a palpable abdominal mass, (2) vomiting, (3) pain, and (4) bloody stools. These symptoms are rather unimportant in the early diagnosis of intestinal invagination in the adult. In most adult cases the symptoms extend over weeks, months or even years, and are attributed to the predisposing cause of the intussusception. Constipation is often observed in these cases. Recurring attacks of colicky abdominal pain are significant and may have extended over a period of several months. Vomiting is an uncommon early symptom but occurs as a late symptom in neglected cases of complete obstruction. The occurrence of blood in the stools in adult intussusception is rare, as is also the palpation of any abdominal mass.

Report of Case

A white female, aged 37, complained of abdominal pain around the umbilicus and extending into the right lower quadrant. These intermittent, colicky pains were of 4 days' duration and were quite aggravating but not severe. There had been no previous tendency to constipation, but the patient had taken laxatives and enemata in an attempt to rid herself of the abdominal discomfort. Her diet had been restricted, and her own words were, "My bowels were at a standstill." There was no nausea or vomiting. She was given a restricted diet, bed rest, heat to the abdomen and an analgesic, with gradual disappearance of the pain. The only other past history finding of significance is a severe attack of acute appendicitis with peritonitis at the age of 9 years. She was very ill at this time. The appendix was not removed during this attack.

The patient was well nourished, and a general physical examination revealed no abnormal findings. Abdominal examination revealed moderate distention with tenderness and muscle spasm over the right lower quadrant. Peristalsis was active, and no masses were palpable. A pelvic examination was negative. The temperature was 99°F., the pulse rate was 100, and the leukocytes numbered 7,300 with a normal differential count.

The patient was explored through a right rectus incision on April 4, 1939. The preoperative diagnosis was questionable, but acute appendicitis was considered most likely. There was a considerable amount of free, straw-colored fluid in the abdominal cavity. There was a thickened mass in the terminal ileum about 2 inches from the ileocecal valve. This proved to be an intussusception of the small bowel. It was easily reduced by mild traction on the bowel and pressure on the mass. The affected area of the bowel was in good condition. An intraluminal tumor was found about 10 inches from the ileocecal valve. This had produced the telescoping of the ileum into itself. The intestine was opened through a transverse incision and the tumor removed. It was attached to the bowel wall by a broad base and was opposite the mesenteric border. The incision in the bowel was closed with 2 rows of inverting sutures. The appendix was retrocecal and mildly injected but did not enter into the acute picture. Further examination revealed no other evidence of tumor formation. The patient had an uncomplicated postoperative course and is symptom-free at this time.

The pathologist's report states that the tumor was covered by intestinal mucosa and consisted of a loose, scattered connective tissue stroma in which typical signet-ring fat cells were imbedded. The appendix presented a picture of general fibrosis most marked in the submucous and subserous coats which were greatly thickened. A diagnosis of lipoma of the ileum and chronic appendicitis was returned.

Comment

Intussusception occurs most commonly in the ileocecal region and usually is a telescoping of the ileum into the ascending colon or the ileum and cecum into the ascending colon. In view of the rare occurrence of this condition no attempt will be made at differential diagnosis with any condition other than acute appendicitis, which is by far the most common pathologic process of this region.

In adult intussusception there is usually a previous history of colicky pains without any febrile or leukocytic elevation. This is no doubt caused by spasm due to the presence of the predisposing cause, such as intraluminal tumor, Meckel's diverticulum, etc., or by early intussusception which later reduces itself. Nausea and vomiting occur comparatively early in acute appendicitis but are late manifestations in adult intussusception when strangulation and obstruction are present. In acute appendicitis there is generally an early rise in temperature and a leukocytic response to the infection. These signs occur later in intussusception as a result of bowel strangulation.

(Continued on page 373)

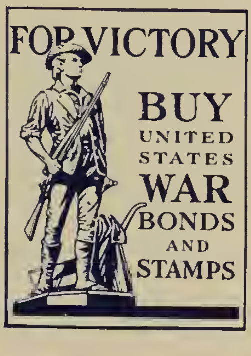
14th

Annual Scientific Assembly

of

THE MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA

SEPT. 29-30, OCT. 1, 1942
MAYFLOWER HOTEL


FOR VICTORY
BUY
UNITED
STATES
WAR
BONDS
AND
STAMPS

Medicine Marches On

Appropriately, the program of the 14th Annual Scientific Assembly of the Medical Society of the District of Columbia is related to the war effort. Many of the speakers are now in the armed services. As will be noted, emphasis has been placed on the diagnosis and treatment of infectious diseases and the treatment of war injuries. These timely subjects should be of equal interest to physicians in civil practice and those now in the military services stationed in or near Washington.

Home of the Medical Society

Scientific and Public Health Exhibits, which in the past have attained a high degree of excellence, will include many new features. A special attraction at the Assembly this year will be the Pan American Exhibit. On display will be works of art, literature, and other objects of interest from the Latin American countries.

Because of existing conditions, social activities will be limited. However, there will be luncheons each of the three days and an informal dinner will close the meeting.

Every doctor finding it possible to do so should be on hand for this Assembly. It may possibly be the last until the war is over. Remember the dates—September 29, 30 and October 1, 1942.

Fred R. Sanderson

General Chairman
Committee on Arrangements

Synopsis of Program

(All meetings at the Mayflower Hotel)

TUESDAY, SEPTEMBER 29, 1942

9:00 A.M.–11:30 A.M.: Scientific Program, Grand Ballroom

12:00 M.–1:30 P.M.: Medical Society Luncheon, Grand Ballroom

Speaker: Admiral Sir Andrew Cunningham, Head of British Admiralty Delegation in Washington

Subject: "War Conditions in the Royal Navy"

2:00 P.M.–4:30 P.M.: Scientific Program, Grand Ballroom

8:00 P.M.: Pan American Exhibit, North Room—open to physicians, their families and friends.

WEDNESDAY, SEPTEMBER 30, 1942

9:00 A.M.–11:30 A.M.: Scientific Program, Grand Ballroom

12:00 M.–1:30 P.M.: Georgetown University Medical Alumni Association Luncheon, Grand Ballroom

Speaker: Fulton Lewis, Jr., Nationally Known Radio Commentator

Subject: "The War as It Looks from Here"

2:00 P.M.–5:00 P.M.: Scientific Program, Grand Ballroom

6:00 P.M.: Women's Medical Society Dinner, Mayflower Hotel

7:00 P.M.: Pan American Exhibit, North Room, and Public Health Exhibit, Pan American Room and Seventeenth Street Parlor—open to the public

8:30 P.M.: Public Meeting

Speaker: Honorable A. A. Berle, Jr., Assistant Secretary of State

Subject: "Considerations of Health as Affecting Foreign Policy"

THURSDAY, OCTOBER 1, 1942

9:00 A.M.–11:30 A.M.: Scientific Program, Grand Ballroom

12:00 M.–1:30 P.M.: George Washington University Medical Society Luncheon, Grand Ballroom

Speaker: Elmer L. Kayser, Ph.D., Dean of University Students and Professor of European History, George Washington University

Subject: "The World Outlook"

2:00 P.M.–4:30 P.M.: Scientific Program, Grand Ballroom

7:30 P.M.: Annual Dinner (Informal), Grand Ballroom

C-H & E

Medical Problems of the War Era

All Sessions in Grand Ballroom, Mayflower Hotel

TUESDAY, SEPTEMBER 29—MORNING SESSION

DIAGNOSIS AND TREATMENT OF INFECTIOUS DISEASES–I

9:00 Epidemic Influenza
Joseph Stokes, Jr., M.D.
William H. Bennett, Professor of Pediatrics, School of Medicine, University of Pennsylvania; Physician-in-Chief, Children's Hospital, Philadelphia

9:25 Present Status of Pneumonia Problem
Colin M. MacLeod, M.D.
Professor of Bacteriology, New York University College of Medicine

9:50 Recess

10:20 Certain Aspects of the Treatment of Meningitis
John H. Dingle, Sc.D., M.D.
Associate in Medicine and Instructor in Bacteriology and Immunology, Harvard Medical School

10:40 Scarlet Fever: the Unitarian Concept of Streptococcal Disease
Lt. Comdr. LeRoy D. Fothergill
Medical Corps, U.S.N.R.; formerly Assistant Professor of Bacteriology and Immunology, Harvard Medical School and Harvard School of Public Health

11:05 Communicable Diseases of Children; Their Prevention, Control and Treatment
Joseph S. Wall, M.D.
Professor of Pediatrics, Georgetown University School of Medicine

TUESDAY, SEPTEMBER 29—AFTERNOON SESSION

DIAGNOSIS AND TREATMENT OF INFECTIOUS DISEASES–II

2:00 The Preventive Medicine Program of the United States Navy
Captain C. S. Stephenson
Medical Corps, U. S. Navy; in charge, Division of Preventive Medicine

2:25 Public Health Control of Venereal Diseases in the District of Columbia
R. A. Vonderlehr, M.D.
Assistant Surgeon General, U. S. Public Health Service; Director, Division of Venereal Diseases

3:00 Recess

3:20 The Use of Typhoid Vaccine in the Army and Recent Studies of Strains for Immunization Purposes
Colonel J. F. Siler
Medical Corps, U. S. Army

3:45 The Rickettsial Diseases
R. E. Dyer, M.D.
Assistant Surgeon General, U. S. Public Health Service; Director, National Institute of Health

WEDNESDAY, SEPTEMBER 30—MORNING SESSION

DIAGNOSIS AND TREATMENT OF INFECTIOUS DISEASES–III

9:00 EXPECTED CASES OF "WAR MALARIA" IN THE DISTRICT OF COLUMBIA
Captain Paul W. Wilson
Medical Corps, U. S. Navy

C-H & E

United States Public Health Service

9:25 THE PRACTICAL ASPECTS OF THE DIAGNOSIS AND TREATMENT OF THE VARIOUS FORMS OF AMOEBIASIS
Captain E. G. Hakansson
Medical Corps, U. S. Navy

9:50 RECESS

10:10 ACUTE DIARRHEAL DISEASES OTHER THAN AMOEBIC DYSENTERY
Richard P. Strong, M.D.
Professor Emeritus of Tropical Medicine, Harvard Medical School

10:40 HOOKWORM AND OTHER INTESTINAL PARASITES
Frederick J. Brady, M.D.
Past Assistant Surgeon, U. S. Public Health Service

11:05 A SURVEY OF THE MEDICAL SITUATION IN THE CARIBBEAN AREA
Comdr. Thomas Byrd Magath
Medical Corps—V(S), U.S.N.R.

WEDNESDAY, SEPTEMBER 30—AFTERNOON SESSION

DIAGNOSIS AND TREATMENT OF INFECTIOUS DISEASES–IV

2:00 INTESTINAL ANTISEPSIS WITH SPECIAL REFERENCE TO SUCCINYL SULFATHIAZOLE
Warfield M. Firor, M.D.
Visiting Surgeon, Johns Hopkins Hospital

2:30 TREATMENT OF PUERPERAL INFECTIONS
Radford Brown, M.D.
Professor of Gynecology and Obstetrics, George Washington University School of Medicine

2:50 RECESS

3:10 THE SULFONAMIDES—A PANEL DISCUSSION
Harrison F. Flippin, M.D., F.A.C.P.
Associate in Medicine, Schools of Medicine, University of Pennsylvania, Philadelphia
Harry F. Dowling, M.D.
Clinical Professor of Medicine, George Washington University School of Medicine
Sanford Rosenthal, M.D.
Senior Pharmacologist, National Institute of Health, U. S. Public Health Service
J. Ross Veal, M.D., F.A.C.S.
Adjunct Clinical Professor of Surgery, Georgetown University School of Medicine and George Washington University School of Medicine; Chief Resident Surgeon, Gallinger Municipal Hospital
W. Calhoun Stirling, M.D.
Washington, D. C.

THURSDAY, OCTOBER 1—MORNING SESSION

TREATMENT OF WAR INJURIES–I

9:00 The Modern Treatment of Burns
Comdr. E. H. Cushing
Medical Corps, U.S.N.R.

C-H & E

National Naval Medical Center

9:20 Sulfonamides in the Emergency Treatment of Wounds
Comdr. J. R. Fulton
Medical Corps, U. S. Navy, Naval Hospital, Bethesda, Md.

9:45 Recess

10:05 Medical Aspects of Chemical Warfare Defense
David D. Rutstein, M.D.
Medical Gas Officer, Medical Division, Office of Civilian Defense

10:50 The Use of Blood Substitutes in the Treatment of Shock
Comdr. Lloyd R. Newhouser
Medical Corps, U. S. Navy

11:10 Medical Experiences in Naval Warfare
Comdr. Arthur J. White
Medical Corps, U. S. Navy

THURSDAY, OCTOBER 1—AFTERNOON SESSION

TREATMENT OF WAR INJURIES–II

2:00 Traumatic Injuries to the Abdomen
Colonel Daniel L. Borden
Medical Corps, U. S. Army; Chief of Surgical Service, Station Hospital, Fort Meade, Md.; Professor of Clinical Surgery, George Washington University School of Medicine

2:20 Diagnosis and Treatment of Head Injuries
Comdr. Winchell M. Craig
Medical Corps-V(S), U.S.N.R.

2:40 Recess

3:00 British Medical and Surgical Experiences in the Middle East
Colonel Frank S. Gillespie
British Army Medical Service

3:45 Blast Injuries
1. Physical Aspects
Lt. Edward L. Corey
Hospital Corps-V(S), U.S.N.R.
2. Pathology, Treatment and Prevention
Comdr. Frederick C. Greaves
Medical Corps, U. S. Navy

Scientific and Public Health Exhibits

The Scientific and Public Health Exhibits will be on display in the Chinese and Pan American rooms and the Seventeenth Street Parlor at the Mayflower Hotel. A special motion picture booth has been constructed adjacent to the Chinese Room. There will be a continuous showing of films on various scientific subjects.

SCIENTIFIC EXHIBIT

Subject	*Sponsors*
Surgical Anatomy of the Ear	Othmar Solnitzky, M.D., and Richard A. Kearny, M.D., Department of Anatomy, Georgetown University School of Medicine
Experimental Tumors of the Liver	U. S. Public Health Service, National Cancer Institute; Carl Voegtlin, M.D., and Staff
Demonstration of Photofluorographic X-ray Units	States Relations Division of U. S. Public Health Service
Evaluation of Heart Size	Robert M. Daley, M.D., Richard S. Gubner, M D., and Harry E. Ungerleider, M.D., Equitable Life Assurance Society of the United States, New York City
Tumors of the Kidney	Eugene R. Whitmore, M.D., Department of Pathology, Georgetown University School of Medicine
The Clinical Analysis of Plasma	Charles S. White, M.D., J. Lloyd Collins, M.D., and J. Weinstein, M.D., Department of Surgery, George Washington University School of Medicine, and Gallinger Municipal Hospital
Angiocardiograms	B. J. Walsh, M.D., S. Katz, M.D., and H. A. Reed, M.D., Department of Medicine and Roentgenology, Gallinger Municipal Hospital
Refrigeration Anesthesia: Its Use in Peripheral Vascular Surgery and Other Types of Surgery to Extremities	Emil J. C. Hildenbrand, M.D., Associate Professor of Clinical Surgery, Georgetown University School of Medicine
The Pathology and Treatment of Frostbite	J. Ross Veal, M.D., and Roy Klepser, M.D., Gallinger Municipal Hospital and Georgetown University School of Medicine
Research Activities: Clinical Electroencephalography; Clinical Biochemistry	George Washington University School of Medicine and St. Elizabeths Hospital
Peritoneoscopy	Leon Gerber, M.D
Medicine and Selective Service	Medical Division, National Headquarters, Selective Service System; Colonel Leonard G. Rowntree and Major Robert A. Bier
Demonstrations	Medical Department, U. S. Navy; Rear Admiral Harold W. Smith, M.C., U.S.N.

PUBLIC HEALTH EXHIBIT

Subject	*Sponsors*
Demonstrations	Washington Heart Association
Venereal Disease Education	Division of Venereal Diseases, U. S. Public Health Service
Demonstrations	American Women's Volunteer Service
Hearing Health	Washington Society for the Hard of Hearing, Inc.
Nursing at the Nation's Service	Graduate Nurses' Association of the District of Columbia
Visiting Nurse Program	Instructive Visiting Nurse Society of Washington, D. C.

Arts and Crafts	St. Gertrude's School of Arts and Crafts
Health in Wartime Washington	District of Columbia Health Department
Rheumatic Fever	Bureau of Maternal and Child Welfare, District of Columbia Health Department; B. J. Walsh, M.D.
Services to the Armed Forces	American Red Cross
"Spotting" Tuberculosis	District of Columbia Tuberculosis Association
Social Hygiene Problems	District of Columbia Social Hygiene Society
Eyes for the Future	District of Columbia Society for the Prevention of Blindness
Demonstrations	Children's Bureau, U. S. Department of Labor; Ethel C. Dunham, M.D.

MOTION PICTURES

Modified Manchester Operation for Procidentia Uteri	Read N. Calvert, M.D.
Prolapse of the Uterus Complicating Pregnancy and Labor	Samuel M. Dodek, M.D., and Julius R. Epstein, M.D.
Indications and Technic Refrigeration Anesthesia	Emil J. C. Hildenbrand, M.D.
Intestinal Anastomosis—Aseptic Basting Stitch Technic	Harry H. Kerr, M.D
The Story of Plasma	Charles S. White, M.D., J. Lloyd Collins, M.D., and J. Weinstein, M.D.
Syphilis	United States Public Health Service
Miscellaneous	United States Navy
Miscellaneous	Washington Society for the Hard of Hearing, Inc.
Immunization	Lederle Laboratories, Inc.
Sex Hormones, Physiology, Diagnosis and Therapy	Parke, Davis & Company

Technical Exhibit

Demands for booths in the Technical Exhibit, which will be on display in the Promenade of the Mayflower Hotel, as in previous years far exceeded the space available. Thirty-six firms will participate as follows:

American Hospital Supply Corporation	(Booth 26)
American Safety Razor Corporation	(Booth 28)
Appleton-Century Company	(Booth 24)
Austenal Laboratories, Inc.	(Booth 27)
Beuchler's	(Booth 36)
Borden Company	(Booth 13)
Burroughs Wellcome & Co. (U.S.A.), Inc.	(Booths 34 and 35)
Camel Cigarettes	(Booth 19A)
Chestnut Farms-Chevy Chase Dairy	(Booth 22A)
CIBA Pharmaceutical Products, Inc.	(Booth 21)
Credit Bureau	(Booth 18)
Doak Company, Inc.	(Booth 9)
Doho Chemical Corporation	(Booth 7)
Fleet, C. B., Company	(Booth 29)
Gibson Company	(Booth 8)
Hynson, Westcott & Dunning, Inc.	(Booth 31)
Kloman Instrument Company	(Booth 3)
Liebel-Flarsheim Company	(Booths 32 and 33)
Lilly, Eli, and Company	(Booth 19)
Mallinckrodt Chemical Works	(Booth 12)
Maxwell & Tennyson	(Booth 2)
Mead Johnson & Company	(Booth 11)
Parke, Davis & Company	(Booth 38)
Peoples Drug Stores	(Booth 25)
Petrogalar Laboratories	(Booth 30)
Philip Morris & Company, Ltd.	(Booth 6)
Saunders, W. B., Company	(Booth 5)
Sharp & Dohme	(Booth 15)
SMA Corporation	(Booth 23)
Smith, Kline & French Laboratories	(Booth 17)
Squibb, E. R., & Sons	(Booth 10)
Turner, C. E., Inc.	(Booth 4)
U. S. Vitamin Corporation	(Booth 22)
Walker Vitamin Products, Inc.	(Booth 37)
White Laboratories, Inc.	(Booth 16)
Wyeth, John & Brother, Inc.	(Booth 14)

Pan American Exhibit

C-H & E

Pan American Building

Those in attendance at last year's ASSEMBLY will remember the excellence of the Military Exhibit. The year before there was the Doctors' Hobby Show. This year there will be another "first," the Pan American Exhibit, which will not only be of great interest but most timely.

Because a number of the exhibits are being shipped directly from the Latin American countries, no details can be given in regard to them until they arrive. However, it is known that works of art will be shown as well as historical objects. The Pan American Union is cooperating with the Subcommittee on Pan American Exhibit and has agreed to provide several interesting displays.

The Exhibit will be located in the North Room and will be open to physicians and guests each day of the ASSEMBLY from 9:00 a.m. to 5:00 p.m. There will be a special showing on Tuesday evening, September 29, for physicians, their families and friends. The general public will be invited to see it on Wednesday, September 30, from 7:00 to 8:00 p.m.

Registration

Mayflower Hotel

Arrangements have been made to facilitate registration of members of the Society by registering those who find it convenient at the Medical Society's office from 2:00 to 5:00 p.m. on Monday, September 28. Registration will begin at the Mayflower Hotel at 9:00 a.m. on Tuesday, September 29, for members of the Society, physicians in the military services, and out-of-town guests. Special provisions have been made for registering dentists, nurses, pharmacists, residents, interns, medical students and others who wish to attend some of the sessions. No one will be admitted to the scientific sessions without a badge which, together with the official program, is obtainable at the registration desk.

All who register prior to 11:00 a.m., Tuesday, September 29, will be given tickets for the Tuesday luncheon. There will be no charge to members of the Society. Out-of-town physicians and other non-members of the Society will be required to pay a registration fee of $3.00 which will include a ticket to the luncheon. *Physicians in the military services will be registered without charge.* However, their registration will not include a luncheon ticket. Tickets for the luncheon may be purchased by non-members of the Society for $1.50. Tickets for the luncheons to be given by the George Washington University Medical Society and the Georgetown University Medical Alumni Association can also be obtained at the registration desk.

Special arrangements have been made for handling telephone calls. Names of physicians being called will appear on a blackboard in the Grand Ballroom of the Mayflower. In responding to calls physicians should make inquiry at the registration desk for the location of telephone booths.

President's Page

THE BUSY DOCTOR WILL BE THERE

It is proverbial that the busier a physician is, the more time he has to devote to matters other than those relating directly to his practice. It is not surprising, then, that the ablest and most faithful members of medical societies are those who have a great many other interests. The Medical Society of the District of Columbia is fortunate in having a number of such men. Apparently they are never too busy to attend meetings or to respond to other demands made upon them by their Society. More often than not they seek no credit nor do they expect any show of appreciation. Their reward lies in the satisfaction of fulfilling their responsibilities or of a job well done. Were it not for the fact that their number is considerable, the existence of medical organizations would be precarious indeed.

This brings me to the point of this message. The 14th Annual Scientific Assembly is just around the corner. It promises to be a meeting that will be long remembered, for on its program are some of the outstanding figures in medicine of our time. Many who are serving with the armed forces will speak on subjects closely touching the health and well-being of every citizen. I cannot conceive of any physician in Washington or its environs who will intentionally fail to attend this year's Assembly. If the usual happens, the busy doctor will be there. As there are few who are not, attendance should be gratifying.

Except for emergencies, physicians could do no better than to lay aside their professional duties for at least a good part of the three days on which the Assembly is to be held. The Assembly will offer an unusual opportunity of hearing important therapeutic measures in wartime discussed. Incidentally, physicians will, for a short period, enjoy relaxation they need.

So the busier you are, doctor, the more time we will expect you to give to the Assembly. It will prove a good investment for you.

Editorials

MEDICAL PROBLEMS OF THE WAR ERA

Wartime Washington is not a convention city. In fact, conventions are being discouraged because of congested living conditions. Housing, despite vast building projects, is still inadequate to meet the needs of an ever-increasing population. Government officials have wisely requested that conventions which would place a further strain on the community's housing facilities be cancelled unless they relate directly to the war effort.

The Committee on Arrangements considered these facts in arriving at the decision to proceed with its plans for the 14th ANNUAL SCIENTIFIC ASSEMBLY, which is to be held at the Mayflower Hotel on September 29, 30 and October 1, 1942. To begin with, many physicians attending the ASSEMBLY do not come from great distances and could, if necessary, go to meetings during the day and return to their homes at night. Undoubtedly there are some who will stay with friends or will find other satisfactory accommodations in hotels and elsewhere. Their number, however, will not be great and will be no burden on the city.

There is, of course, another side to the matter of holding the ASSEMBLY. Medicine cannot remain static even in time of war. The medical profession must keep abreast of scientific progress if it is to render the best service of which it is capable. The scientific program to be presented this year will afford physicians in civilian practice, as well as those in the military services stationed in Washington or the adjacent area, an unusual opportunity of hearing widely known authorities discuss the treatment of infectious diseases and recent developments in war medicine, particularly as they relate to the care of the civilian population. The theme of the meeting is appropriately MEDICAL PROBLEMS OF THE WAR ERA. Fortunately many of the speakers who otherwise would be unobtainable are on military duty in Washington. Despite their increasing responsibilities, they have generously consented to participate in the ASSEMBLY program.

Properly, social events at the ASSEMBLY will be modest as compared with previous years. However, there will be the usual luncheons, and an informal dinner will conclude the sessions. There will therefore be ample opportunity for physicians in attendance to fraternize with their colleagues.

Whether conditions in 1943 will be such that the ANNUAL SCIENTIFIC ASSEMBLY can be held is uncertain. Most physicians, recognizing this fact, will set aside the three days during which the coming ASSEMBLY is held for what will undoubtedly be a most unusual and worthwhile meeting.

LOYAL SERVICE PRAISED

Since October 16, 1940, when the Selective Service System was placed in operation, the medical and dental professions have made tremendous contributions of time and skill to the Service without financial remuneration. Their only compensation has been a sense of satisfaction in a job well done and the feeling that they are rendering a valuable service to the country in a time of national peril.

In the District of Columbia all nominations of physicians and dentists to local draft and medical advisory boards have been submitted to the Director of Selective Service, to be forwarded to the District Board of Commissioners, by committees of the following professional organizations: The Medical Society of the District of Columbia, the District of Columbia Dental Society, the Medico-Chirurgical Society of the District of Columbia, and the Robert T. Freeman Dental Society. Upon approval by the Commissioners, the names of the nominees have been forwarded to National Headquarters of the Selective Service System for appointment by the President of the United States.

Altogether, approximately 250 Washington physicians have been appointed local examiners. While some have been unable to function for various reasons such as ill health and conflicting duties, the large proportion of those appointed have rendered loyal service month after month. In addition to those serving on local boards, approximately 100 physicians in the various specialties have served on medical advisory boards. Approximately 50 dentists were also appointed to these boards.

In the beginning, the policy of conducting group examinations was adopted as being more efficient and expeditious than any other system. Under this plan the following Washington hospitals made available their clinic facilities and a large number of nursing, clerical and laboratory personnel: Emergency, Freedmen's, Garfield, Georgetown, Providence and Sibley. Up to August 11, 1942, examinations had been conducted in these hospitals on 117 nights.

During the past 22 months, 70,984 registrants have been given physical examinations by participating physicians. In each instance, serologic tests for syphilis were made by the District Health Department laboratory. In addition, the Department's Bureau for Tuberculosis made chest examinations, including X-rays, of 35,000 registrants examined prior to December 31, 1941, at which time this procedure was taken over by the Army Induction Station at Fort Myer, Virginia.

Since the first of the year, the medical and dental professions have provided seven panels of fifteen examiners each for the Army Examining Station. Each physician serves one day a month for which he receives an honorarium barely sufficient to cover the cost of maintenance of his office during his absence.

The Director and all officials in charge of the administration of the Selective Service System in the District are fully aware of the contribution made by the medical and dental professions and are deeply grateful.

A. C. Gray
Colonel, M.C., U. S. Army
State Medical Officer

INNOVATIONS IN SOCIETY'S PROGRAM PROMISED

War days are busy days for the men of medicine, and with many entering military service, they are going to be still more difficult. The increased burden now placed on physicians strikes at the heart of the Society's plans for another season of meetings. Because the days are getting busier, with no compensating flexibility in the clock on the wall, those in charge of the program have been doing some serious thinking. Obviously the program must be adapted to the tempo of the times without sacrificing the informative value of the gatherings.

Looking at the world scene, one is struck by the changes that are taking place. Some are good, some are not so good. In either case, new methods are the vogue and perhaps innovations will solve the dilemma of the busy physician who wants to meet with his fellows and who is anxious to keep abreast of the rapid progress of medical science in time of war.

Since time is pressing, this factor has been carefully considered in making plans for the next organization year. Decisions arrived at by the Society's Program Committee were that there should be (1) fewer meetings (this is in accordance with the Society's action taken in March 1942); (2) a change of time at which meetings are held (many favor a later hour); (3) shorter meetings (too much time, the Committee agreed, is wasted in desultory discussion); and (4) no conflicts with other meetings where it can be avoided.

The Committee recognizes the fact that it is increasingly difficult for the average member to attend as many meetings as he attended a year or two ago. Difficulties of getting around in a booming Nation's Capital and the blackout problem enter into the picture.

Selection of a later starting time for meetings has been considered. If the time is moved to 8:15 or 8:30, many physicians with late office hours will be able to attend. Discussion of the matter gave rise to a plan for occasional luncheon meetings. Arrangements are already under way for a midday session. If successful, it may prove feasible to replace one meeting monthly with a noon gathering. Buffet suppers have been considered also, with perhaps a portion of authentic beef and a vial of genuine sugar as bait.

Since the time problem is so vital, the Committee has requested that business sessions at scientific meetings be eliminated or reduced in length to only a few minutes. With more time being devoted to the scientific program, greater care will be exercised in selecting subjects and speakers. Conciseness in presentation of material is of importance. The desire for shorter preambles, fewer adjectives, and emphasis on conclusions will necessitate proper instruction being given speakers. Frank and critical discussion will contribute to the value of programs.

The busy physician who has scanned a 200-page tome in ten minutes, reading the conclusions, will get the general idea. He can picture a meeting at which a widely known out-of-town member of the profession condenses into a half hour or 45 minutes the important facts on several related subjects. He can hear the equally terse and ably prepared discussion by a Society member. Then he can imagine an adroit devil's advocate "turning on the heat" so that controversial angles are thoroughly explored.

Special medical groups should take the foregoing plans into consideration so that through their coöperation and support, meetings of the Medical Society of the District of Columbia can augment and supplement some of their own programs.

We are out to win the war. Keeping medical standards high is important. Let us "Carry On."

Oscar B. Hunter, M.D.
Arnold McNitt, M.D.

PERTINENT PARAGRAPHS

August Meetings While August is vacation month, meetings of the Society's boards and committees, although fewer in number, continued. Meetings held during the month were as follows:

August 4	Subcommittee on Child Welfare
August 20	Subcommittee on Banquet, Luncheon and Entertainment, Annual Scientific Assembly Committee on Arrangements, A.S.A.
August 24	Executive Board
August 25	Committee on Public Relations
August 27	Section on Pathology and Laboratory Medicine

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Gasoline Rationing Although steps were taken to prevent unnecessary inconveniences to physicians applying for supplemental gasoline rationing books, numerous protests have been received at the Medical Society's office. The most common complaints were the time consumed waiting in line and the indifference of rationing boards to physicians' needs. There were also charges that some physicians received allotments in excess of their needs and others did not obtain enough to carry on their practices.

Investigation disclosed that some complaints were justified. However, much of the difficulty was due to unforeseen complications in the development of a new and vast undertaking and the inexperience of rationing boards. Undoubtedly the rationing program will be conducted more efficiently when those in charge become familiar with their duties and citizens more accustomed to the rationing system.

Some of the difficulties encountered by physicians were foreseen by the Society's officers. In June a letter was directed to Mr. Lawson J. Cantrell, Assistant Superintendent of Public Schools in the District of Columbia, who was in charge of registration for gasoline rationing. Mr. Cantrell responded promptly, stating that special arrangements had been made for physicians, a room having been set aside in each of the public schools where registration was being held so that they would be taken care of without delay. This information was transmitted immediately to the Society's membership. No complaints in regard to registration were received.

When applications were made for supplemental gas rationing books, the Secretary of the Society communicated with Whitney Leary, Director of OPA for the District of Columbia, and L. P. Steuart, Chairman of War Price and Rationing Board No. 5. Mr. Steuart notified all rationing boards in the District, "It is urgently requested that these [physicians'] applications be given consideration as soon as possible." Both Mr. Leary and Mr. Steuart were most cooperative and investigated reports of unnecessary delay or refusal of boards to expedite the issuing of supplemental books to physicians.

There are still physicians who apparently are having difficulty in obtaining a sufficient amount of gas for professional purposes. Rationing authorities have stated that every physician in active practice will receive the gasoline he needs. If his original allowance is insufficient he should make another application to his rationing board.

It is too much to expect that the rationing system will ever function perfectly. However, there is every reason to believe that many of the present defects will in time be remedied. In the meantime, physicians like all citizens must make allowances for the difficulties confronting those charged with the responsibility of administering this emergency program.

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Health Examinations and the Doctor

In the editorial columns of the August issue of the MEDICAL ANNALS, the indifference of physicians to their own physical well-being was commented upon. Various medical journals were quoted to the effect that physicians believe in health examinations for their patients but not for themselves. Reference was made to a report of the Medical Society's Committee on Public Health in which it was suggested that members have themselves examined.

On August 4 the Committee directed a communication to the Society calling upon members to demonstrate their belief in periodic health examinations. It was stated that because of the strain to which physicians are being subjected, now was the opportune time for them to have a check-up. No other group, it was pointed out, is putting in longer hours and working under greater pressure and the examinations would therefore serve a double purpose: first, and most important, it would directly benefit the practitioners examined, and second, it would do much to stimulate public interest in health examinations.

At the time this is written, 85 physicians have informed the Committee that they will be examined and that they might be listed at the

Society's office as agreeing to have annual check-ups. The Committee feels that this response is encouraging and hopes that in the next few weeks many more practitioners will inform the Society that they will coöperate.

Rates Fixed for Gallinger Patients

On July 31, 1942, the District Board of Commissioners issued an order, effective immediately, that persons treated at Gallinger Municipal Hospital who can pay for the services which they receive must do so in accordance with their ability to pay. The order reads:

1. That no person is eligible to receive medical care at the expense of the District of Columbia if he has an interest in real property with an assessed valuation of $2,500 or more; if he has real or personal property of $250 or more.

2. That every individual admitted to Gallinger Hospital shall be required to sign a promissory note to cover the costs of his hospitalization.

3. That the following shall be the standard to determine the rates of payment:

Status of Individuals	Monthly Income		
	A	*B*	*C*
(a) Single	$50 or less	$51–64	$65
Single, 1 dependent	62 or less	63–76	77
Single, 2 dependents	72 or less	73–86	87
Single, 3 dependents	82 or less	83–96	97
Single, 4 dependents	92 or less	93–106	107
Single, 5 or more dependents	102 or less	103–113	114
(b) Man and wife	75 or less	76–89	90
Man and wife, 1 dependent	87 or less	88–101	102
Man and wife, 2 dependents	97 or less	98–111	112
Man and wife, 3 dependents	107 or less	108–121	122
Man and wife, 4 dependents	117 or less	118–131	132
Man and wife, 5 or more dependents	128 or less	128–141	142

"A" indicates no charge; "B" part rate (see schedule below); and "C" indicates full rate.

(c) The following interpolation schedule is suggested for class "B":

Deviation	Payment
Minimum or $1.00 over minimum	$.50 per day
$2.00 or $3.00 over minimum	1.00 per day
$4.00 or $5.00 over minimum	1.50 per day
$6.00 or $7.00 over minimum	2.00 per day
$8.00 or $9.00 over minimum	2.50 per day
$10.00 or $11.00 over minimum	3.00 per day
$12.00 or $14.00 over minimum	3.50 per day

4. That the Health Officer, D. C., or his duly authorized agent, be permitted to make such deviation from the hereinbefore schedules as he or his agent may deem necessary or proper; Provided, That a monthly list of such deviations be submitted to the Commissioners with the reasons for such deviations.

5. The above schedule to be effective as of the date of this order for an initial temporary period of sixty (60) days.

6. That the above rates and schedule do not affect the rates and schedule now in effect for contagious diseases ($4.00 per diem), tuberculosis ($3.00 per diem) and psychopathic cases ($3.00 per diem) and apply only to other cases gaining entrance to Gallinger Hospital under emergency conditions.

The Feminine Outlook

In an article entitled "War and the Suprarenals," which appears in the August issue of the *Rocky Mountain Medical Journal*, Dr. W. G. Richards comments upon the inevitability of wars and our ability to cope with them. He says:

> "It would almost seem . . . that war is a phenomenon to be periodically expected, and that the part of wisdom would be to take care that we are prepared at all times to meet its challenge successfully. We may continue the search for some means for its prevention, but at the same time we must consider whether its constant recurrence does not have some biological significance, for if this search should eventually prove successful, the alternative would have to assure that we do not lose whatever beneficiary purpose war achieves. This beneficial purpose I believe to be the preservation of racial and individual virility, and this virility I think can be shown to depend upon the functional activity of our suprarenal glands."

He then proceeds to enlarge upon scientific aspects of this thesis and continues:

> "When the female essays to keep the male at her side by making him comfortable his male characteristics be-

come less evident, and it is reasonable to assume that his androgenic hormones have decreased. Consequently, when an individual, a group, or a nation, having acquired ease and comfort, becomes so enamoured of them that it is unwilling to endure the inevitable hardships of fighting for itself and its possessions, it places itself at the mercy of those other groups which, lacking the material foundations for physical ease, are compelled to fight and struggle for them."

"We in this country have special need to reflect upon the physiology of the suprarenal glands. We have had more privileges and luxuries than any nation ever had before, and inevitably we became soft. Inevitably, too, we have been forced into war, a war in which, in spite of all the verbal camouflage, the simple issue is whether we will be the top or under dog. Possibly in the end we will thank the Japs for their attack upon us. At least their evident prowess should challenge us to stimulate our own suprarenals to the production of androgenic hormones. For perpetual peace, even if desirable, is unlikely, an iridescent dream, engendered by the feminine mind of both sexes.

"We of the medical profession have also special need for reflection. We are continually confronted with the feminine outlook. Women run the hospitals, even insisting that we conform medical and surgical practice to their preconceived opinions. Nurses, particularly public health ones, would instruct us how to carry on our practices. Women lead campaigns to prevent tuberculosis and abolish cancer, and expect us to follow meekly at the tails of their carts. Is it any wonder, then, that we acquire feminine characteristics, and that a certain 'cattiness' can sometimes be seen in the relationships of doctors to one another? For the good of their souls and the health of their suprarenals doctors should welcome the prospects of military service, instead of retreating behind the protection of more or less evident rationalizations.

"After all, what is the difference between risking one's life by bombing and risking one's life by a coronary thrombosis, a ruptured gastric ulcer, or a reactivated pulmonary tuberculosis? Have Macauley's noble lines lost their inspiration?

> To every man upon this earth death cometh soon or late.
> And how can man die better than facing fearful odds
> For the ashes of his fathers and the temples of his gods?

"For actual life is conflict and danger. Perhaps in a future life, if there is one, we may be content to recline in safety upon auriferous couches, eternally chanting hymns of poor poetry and bad music, but here in this life we can always count on the ungodly to disturb our peace. To meet them successfully we need to keep our endocrines, and specifically our suprarenals, in an efficient condition, and for their stimulation nothing equals war."

Many will find Dr. Richards more eloquent than logical. One may not seriously disagree with him that human nature being what it is, wars are perhaps inevitable. One may even go along with the idea that war has its compensating factors. However, his thesis that the feminine influence is a destructive force is something else again. Certainly women cannot be charged with the responsibility for our becoming soft. It is significant that there has been no protest from women whose husbands, sons and fathers have gone off to meet the most destructive foe in human history. On the contrary they have shown superb courage.

Dr. Richards' contention that doctors are being led around in public health movements and other medical activities by women is amusing. Perhaps the doctor intended it to be so. He undoubtedly had his tongue in his cheek when he commended war as a developer of male characteristics. It would be sad indeed if we could not believe that when victory is ours, war will be abolished for generations to come if not forever.

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More Medical Plans Under Way

Despite the threatened shortage of physicians and the probable rationing of medical care, the establishment of two medical care plans have been announced within the past month. The Massachusetts Medical Society recently mailed to its members a brochure describing in detail the methods of operation of the Massachusetts Medical Service, a "state-wide system for prepaid budgeting of medical care." The *New England Journal of Medicine* editorializes on the Service as follows:

"This corporation, popularly called the 'Blue Shield,' will offer protection to employees and their families against the financial burdens of severe illness. As many physicians know, it is the fruit of more than three years' study by a special committee appointed by the Society and is based on the opinions of the best thinking medical men throughout the country. It is, in effect, the physicians' own answer to the grave social problem confronting the Nation of how best to provide adequate distribution of medical care; and those who have studied the problem believe that this plan is far sounder than the schemes that have been and are being advanced by governmental, state and consumer-coöperative groups.

"The present contract will offer hospital surgery, obstetrics and diagnostic X-ray services. It is the initial step in the development of a complete medical service and is limited in scope only because the public is not yet ready for a full-coverage contract. The limitations of the contract, however, do not exclude any physician from participation, and every doctor is urged to participate from the outset of the plan, which will next develop a contract covering all hospital expenses and, finally, one including medical expenses in hospital, home and office.

"The Blue Shield is an actuality: its charter has been granted; its capital funds have been provided by the Massachusetts Medical Society; and its offices are open at 230 Congress Street, Boston. It has joined forces with the Blue Cross and will reap the benefits of the hospital plan's wide backing by industrial and business leaders, as well as the confidence of its more than 400,000 subscribers. The Blue Cross will take over the administrative functions and the enrollment of subscribers for the Blue Shield, but each will act as an independent organization, with the allocation of costs subject to the approval of the State Commissioner of Insurance. This arrangement will save duplication of effort, needless expenditure of funds and serious loss of time."

The Service will begin operation shortly after Labor Day.

An entirely different medical care program has been inaugurated in Rhode Island. In a communication received from the Providence Medical Association, the adoption by the Rhode Island General Assembly of a Cash Sickness Compensation Act is announced. This legislation is described as the "first of its kind to be enacted by State Legislature in the country."

Under the provisions of the Act, a fund is created known as the Rhode Island Cash Sickness Compensation Fund, to be administered by the State's Unemployment Compensation Board "without liability on the part of the State beyond the amount paid into and earned by the fund." Each employee is required to contribute to the Fund "with respect to employment after June 1, 1942, or after the date upon which his employer becomes subject to this Act, whichever is later, an amount equal to one per cent of his wages paid by his employer up to $3,000 in any calendar year." Benefits, of course, are in cash, and become payable on and after April 1, 1943. They are scaled according to the wages paid each employee. There is a waiting period of one week. An individual is disqualified from receiving benefits during any week if he receives compensation under the workmen's compensation law of any state or under a similar law of the United States; or primary insurance benefits under Title II of the Federal Social Security Act, as amended, or similar payments under an act of Congress; or benefits under an employment compensation law of any state or of the United States; provided, that remuneration in the first two instances is less than the benefits which would otherwise be due under the Act; then he shall be entitled to receive for such week, if otherwise eligible, benefits reduced by the amount of such remuneration.

The medical profession of the State has no direct connection with the operation of the Act; however, as pointed out by the Rhode Island State Medical Association, the coöperation of physicians is essential to the plan's success.

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The Contribution of Medical History

In each issue of the *Virginia Medical Monthly* there appears a "guest editorial" written by some national figure on a timely subject. The contributor in August was Dr. Henry E. Sigerist, widely known among the medical profession for his liberal views. Dr. Sigerist writes:

> "The more scientific knowledge the physician has, the better prepared he is to combat disease; but knowledge alone is not sufficient. It has to be applied to become effective. And whether society is willing and able to accept the physician's advice depends on a great variety of factors. It seems to me that in this field medical his-

tory can make an important contribution and can help in planning for the future. This presupposes, however, that our historical views be correct, the result of serious historical research. True history is always fertile, as Benedetto Croce once said, while untrue history written frivolously is destructive. If we build a sentimental, romantic, legendary history of our past, as professions are sometimes inclined to do, our conclusions cannot be correct. If we wrongly assume that physician and patient, individually and in their relationship, were always the same, we will conclude that there is no reason why anything should be changed now or in the future. Things look different, however, as soon as we know what developments have actually taken place. History teaches us that the position of the sick man and that of the physician in society have changed a great deal in the course of time. The development of science and technology created a new medical science, very different from that of the past, highly effective, highly specialized and technical, and very costly. The same basic force, however, namely, the development of science and technology, resulted in the industrialization of the Western world and changed the structure of society basically. Today the great majority of all gainfully employed persons consists of wage-earners and salaried employees, in other words, of people who depend for an income on the labor market and have no social security. It is obvious that the application of this new medical science to a new type of society calls for new forms of medical service. If we want to act intelligently in this field also, we shall not advocate medieval forms of medical practice for a modern industrial society.

"We must know the facts, be fully aware of the situation that has been created by the developments of the last hundred years. It seems to me that a careful historical analysis can be very fruitful. It will help us not only to understand the past but also to plan for a better future."

Dr. Sigerist has stated effectively what many thinking physicians believe. Tangible evidence of this fact are the numerous experiments with new methods of providing medical care now being conducted by medical groups in various parts of the country.

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Indiana Journal Commended

On various occasions, mention has been made in the MEDICAL ANNALS of publications of unusual merit issued by medical organizations. The August issue of the *Journal*

(*Continued on page 373*)

WOMAN'S AUXILIARY NOTES

The following officers of the Woman's Auxiliary to the Medical Society of the District of Columbia assumed office July 1:

Mrs. A. Magruder MacDonald, *President;* Mrs. L. Bryson Norris, *First Vice President;* Mrs. Joseph L. Gilbert, *Second Vice President;* Mrs. Duane C. Richtmeyer, *Recording Secretary;* Mrs. Philip O. Pelland, *Corresponding Secretary;* Mrs. John J. Shugrue, *Treasurer;* Mrs. Thomas C. Thompson, *Parliamentarian;* and Mrs. Leon A. Martel, *Historian.*

Committee chairmen and members who have been appointed to serve during the ensuing year are as follows:

MEMBERSHIP COMMITTEE: Mrs. Henry A. Hornthal, *Chairman;* Mmes. William F. Burdick, Harold R. Downey, B. J. Mundell and W. J. B. Orr.

WAYS AND MEANS COMMITTEE: Mrs. Don S. Knowlton, *Chairman;* Mmes. Harold R. Downey, E. Leonard Goodman, Frank M. Hand, Vincent B. Hungerford, Jesse T. Mann and R. Lomax Wells.

PROGRAM COMMITTEE: Mrs. Fred R. Sanderson, *Chairman;* Mmes. Ralph J. Carbo, William P. Herbst, Edgar M. McPeak and Arch L. Riddick.

FINANCE COMMITTEE: Mrs. J. Lawn Thompson, *Chairman;* Mmes. James N. Greear and Caryl Burbank.

SOCIAL COMMITTEE: Mrs. Jesse T. Mann, *Chairman;* Mmes. Daniel L. Borden, Tomas Cajigas, Richard B. Castell, George Reeves, Roy Lyman Sexton and W. Calhoun Sterling.

PUBLICITY COMMITTEE: Mrs. Tomas Cajigas, *Chairman;* Mmes. Harry Fowler and Watson W. Eldridge.

HOUSE COMMITTEE: Mrs. Thomas B. Crisp, *Chairman;* Mmes. J. Chester Brady, George H. Crofton, James G. Cumming, Richard E. Dunkley, Watson W. Eldridge and R. Lee Spire.

PUBLIC RELATIONS COMMITTEE: Mrs. John A. Reed, *Chairman.*

PHILANTHROPIC COMMITTEE: Mrs. Ernest E. Hadley, *Chairman;* Mmes. Watson W. Eldridge, Andrew B. Evans, Joseph L. Gilbert and Winfred Overholser.

EDUCATIONAL COMMITTEE: Mrs. M. Russell Edmonston, *Chairman;* Mmes. James A. Cahill, Jr., Richard B. Castell, Herbert E. Martyn, Francis X. McGovern and J. Winthrop Peabody.

HYGEIA COMMITTEE: Mrs. William D. Terrell, Jr., *Chairman;* Mmes. Robert Detwiler, Mervin W. Glover, Gilbert Rude and James C. Waters.

LIAISON COMMITTEE: Mrs. Oscar B. Hunter, *Chairman;* Mmes. Frederick C. Fishback and Richard B. Castell.

BULLETIN COMMITTEE: Mrs. Harry Zehner, *Chairman.*

SPECIAL COMMITTEE—RED CROSS: Mrs. Charles H. McEnerney, *Chairman;* Mmes. Harry F. Anderson, Daniel L. Borden, Herbert S. Gates, A. Barnes Hooe and Harry S. Lewis.

War Section

DISTRICT CIVILIAN MEDICAL NEEDS BEING STUDIED

Some time ago the Directing Board of the Procurement and Assignment Service for Physicians, Dentists and Veterinarians appointed an Advisory Committee on the Allocation of Medical Personnel to study the distribution of medical personnel throughout the country and to establish criteria of essentiality for physicians in civilian practice, medical schools, hospitals and industry. A few states were selected in which to make special studies for the purpose of aiding in the establishment of these criteria. Such a study has just been completed for Maryland. One is now under way in Connecticut.

Because of the difficulty of determining the status of physicians for Washington, it was suggested by Dr. Frank H. Lahey, Chairman of the Directing Board of the Procurement and Assignment Service, that a study along these lines be undertaken in the District of Columbia. Dr. F. X. McGovern, State Chairman of the Procurement and Assignment Service for the District, responded immediately, stating that he was in accord with the proposal and pointing out the urgency of ascertaining the number of physicians engaged in practice in Washington as compared with the population. Dr. O. F. Hedley, Surgeon for the United States Public Health Service, and Mr. George St. John Perrott, Chief of the Division of Public Health Methods in the Public Health Service, were designated to make the study. It was begun on August 21 and will be completed in about two weeks.

Registration of all physicians licensed to practice in the District of Columbia was held by the District Procurement and Assignment Committee on May 12 but it has been impossible until recently to ascertain how many have been commissioned since that time. For this reason, the data obtained from the registration could not be used for the purpose of determining the ratio of physicians to population at any given time. The registration cards, however, have proved valuable to the local Committee as well as to those now making the study for the Procurement and Assignment Service.

LIABILITY INSURANCE FOR PHYSICIANS IN THE ARMED SERVICES

Physicians entering the armed services have inquired at the Society's office as to the necessity of carrying professional liability insurance while in the service. An editorial on this subject appeared in the May 1942 issue of the Medical Annals. Since that time, local representatives of the United States Fidelity and Guaranty Company, which writes the group liability policy covering members of the Medical Society of the District of Columbia, have received the following notice from the Company's Department of Accident and Health.

"We are informed that the Judge Advocate General of the Army has held that members of the Army are entitled to the same civil rights of action against a physician as they would have in civilian life. The American Medical Association, some time ago, reminded their members of this, so, by inference, there is still some necessity for the maintenance of professional liability insurance when a physician or surgeon leaves his civilian practice and takes up similar practice in any branch of the armed services.

"The legal status of a dentist under similar circumstances is, consequently, the same as that of a doctor or surgeon, although we have not heard that the Judge Advocate General of the Army has made a ruling specifying dentists or that the American Dental Association has commented upon this question in any of their publications.

"It may be that practically the liability is much less because we do not believe that it is as likely that men receiving professional care while in the services will sue for alleged malpractice arising out of these treatments to the same extent as civilians will sue practitioners in civilian life.

"The policies for physicians or dentists, individual or group, cover this contingency but some practitioners may wish their insurance limited to it after they enter the service. We suggest the use of the following endorsement, and which will permit a reduction of the premium to one-half of the full coverage rate and which will permit proration from the date of leaving civil practice and entering practice in the armed service:

> 'IT IS HEREBY UNDERSTOOD AND AGREED that the coverage of this policy is limited to claims or suits arising out of professional services rendered or which should have been rendered to persons in the armed forces of the United States while the assured is practicing his profession as a member of the forces.'

"There is also another and entirely different need of liability protection; that is, the doctor or dentist leaving a private civilian practice frequently appoints some fellow practitioner to take care of his practice while he is absent in the armed forces. If he does so, he may have a contingent liability for his responsibility in the selection of this temporary successor. If the successor is alleged to have injured any of the former doctor's patients, those patients may bring suit against the former doctor as well as against the temporary successor, so the former doctor will at least face the expense of having the claim or suit investigated and possibly the costs of defense in addition to the more remote possibility of a judgment against him. Accordingly, the maintenance of professional liability policies to take care of this hazard is desirable.

"If some practitioners wish their insurance limited to this coverage after they have entered the service, we suggest the use of the following endorsement, and which also will permit a reduction of the premium to one-half of the full coverage rate and proration from the date of leaving civil practice and entering practice in the armed services:

> 'IT IS HEREBY UNDERSTOOD AND AGREED that the coverage of this policy is limited to claims or suits arising out of the assured's civilian practice when it is alleged that the injury done is because of professional services of another practitioner or practitioners authorized by the assured to care for his professional practice while the assured is absent in the armed services of the United States.'

"If the assured entering the armed services wishes both contingencies covered, there is no need to endorse his policy.

"There is also the possibility of the assured while in one of the armed services occasionally handling a little civilian practice, as in an emergency like in an air raid or caring for the families of officers, soldiers, sailors or marines or possibly other civilians. The policy as written covers this contingency and if the assured wishes his policy limited to the first or to the second contingency and with the premium reduced, we are willing to add to the endorsement as follows:

> 'IT IS FURTHER UNDERSTOOD AND AGREED that the policy protects the assured while he is a member of the armed forces of the United States for any claim or suit arising against him out of his professional services given or which should have been given in emergency or otherwise in limited practice among civilian patients.'

"If the practitioner is insured under a group physicians or dentists liability policy the opening sentence of either endorsement should say:

> '. . . the coverage of the group policy is applicable to the certificate to which this endorsement is attached . . .' "

Physicians covered by the Society's group liability policy desiring to have their policies endorsed as stated in the above notice should communicate with Mr. Frank R. Strunk, 1508 H Street, N. W., Republic 1733.

RULES APPROVING HOSPITALS TRAINING NURSES' AIDES MODIFIED

On August 5, 1942, 32,000 women had enrolled for Volunteer Nurses' Aides training, 19,000 of whom had satisfactorily completed the course. With but few exceptions these nurses' aides received their training in hospitals on approved lists of the American Medical Association and the American College of Surgeons. The results in quality of service have been satisfactory to both the hospitals and the Red Cross Chapters conducting this project. It is expected that these institutions will continue to coöperate in the training of nurses' aides and to make every effort to increase the numbers. But according to the Office of Civilian Defense, this will not solve the total problem.

In communities where there are hospitals approved by the American College of Surgeons and registered with the American Medical Association, Volunteer Nurses' Aides will continue to be trained in such hospitals. However, in view of the need for nurses' aides in communities in target areas where there are no hospitals or an insufficient number of hospitals on the above mentioned approved lists, exceptions may be made. To determine which hospitals may be approved for training nurses' aides, immediate steps will be taken to arrange for conferences in each state with the State Hospital Association, the State Board of Nurse Examiners, the State Chief of Emergency Medical Service and his Nurse Deputy, and a Nursing Consultant from the Area Office of the American Red Cross for the purpose of reviewing the entire hospital situation in the state.

As a result of these conferences, a list will be drawn up classifying hospitals in each state for the training of nurses' aides in two groups:

A. Hospitals approved by the American College of Surgeons and registered with the American Medical Association; and

B. Hospitals not registered as above but which in the opinion of representatives of the various state agencies should be approved for training nurses' aides in view of the present war emergency.

OCD BLOOD PLASMA BANK

Several months ago, the Washington Central Labor Union donated to the Office of Civilian Defense for the Washington Area the sum of $15,000 for the purpose of preparing 2,000 units of blood plasma, which will be held in reserve to be used in casualties that may result from enemy action against Washington. Dr. Roger M. Choisser was appointed Assistant Medical Officer in Charge of the Plasma Bank by Dr. John A. Reed, Chief Medical Officer of Civilian Defense in the District of Columbia. Five hospitals were established as bleeding centers where donors are accepted by appointment made through the Office of Civilian Defense. Hospitals participating are Garfield, Providence, Emergency, Georgetown and Alexandria. Each bleeding center is under the direct supervision of the hospital's pathologist.

Blood is forwarded daily from the hospitals to the George Washington University School of Medicine where there is a processing center under Dr. Choisser's supervision. He is assisted by a bacteriologist, a serologist, and a general technician. Plasma is prepared in units of 250 c.c. quantities and is distributed to ten strategically located hospitals within the Washington Metropolitan Area. Each hospital designated as a distributing center is supplied gratis with a low temperature freezing cabinet, which will maintain plasma in a frozen state. All plasma is prepared in accordance with rules and regulations of the United States Public Health Service, and in accordance with the manual recently issued by the Office of Civilian Defense. Donors have already been registered, most of them being members of the Washington Fire and Police Departments, air raid wardens, and their associates. It is anticipated that donors obtained from these sources will be sufficient to provide blood required for the preparation of the plasma needed.

The blood plasma bank was developed in coöperation with the Medical Society's Section on Pathology and Laboratory Medicine, to which this problem was referred. Dr. Choisser was appointed by the Section as chairman of a subcommittee to investigate the possibility of establishing a central bank rather than separate banks under the direction of pathologists in the different hospitals.

CONFERENCE ON VENEREAL DISEASE CONTROL NEEDS IN WARTIME

Venereal disease and America's war effort will be discussed by high-ranking medical officers of the War and Navy Departments, prominent physicians, health officers and others at a Conference in Hot Springs National Park, Arkansas, October 21–24, 1942. Headquarters will be at the Arlington Hotel.

The Conference will be held under the auspices of the United States Public Health Service in conjunction with the Eighth Annual Meeting of the American Neisserian Medical Society. Surgeon General Thomas Parran will preside. State and local health officers, venereal disease control officers, practicing physicians, and all others engaged in venereal disease control activities are invited to attend.

Subjects for discussion will include venereal disease control measures influencing the war effort, epidemiology of syphilis and gonorrhea—1942, wartime venereal disease control education, research influencing the wartime venereal disease control program, and technics of venereal disease education.

Governmental, professional and health organizations to be represented at the Conference include: the War Department, the Navy Department, the Social Protection Section of the Office of Defense Health and Welfare Services, the American Medical Association, the American Neisserian Medical Society, the American Social Hygiene Association, state and local health departments, and the United States Public Health Service.

Among the speakers will be Lt. Col. Richard H. Eanes, Assistant Director, Medical Division, Selective Service System; Captain C. S. Stephenson, In Charge, Division of Preventive Medicine, Bureau of Medicine and Surgery, United States Navy; Dr. J E. Moore, Baltimore, Md.; Dr. Donald H. Williams, Medical Director, Division of Venereal Disease Control, Provincial Board of Health, Vancouver, B. C.; Assistant Surgeon General R. A. Vonderlehr, Division of Venereal Diseases, U. S. Public Health Service; Dr. George M. Leiby, Director, Division of Preventive Medicine, Louisiana State Department of Health, formerly Director of the Bureau for Venereal Diseases, District of Columbia Health Department; Mr. Charles P. Taft, Assistant Director, Office of Defense Health and Welfare Services; Dr. Arthur H. Sanford, Mayo Clinic, Rochester, Minn.; and Drs. P. S. Pelouze and John H. Stokes, University of Pennsylvania, Philadelphia.

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The number of Society members entering active service is increasing steadily. The following members have been reported in service since May 1942: Victor R. Alfaro, John J. Andrina, Ellis April, Louis B. Bachrach, George L. Ball, Thomas Bradley, Peter P. Brue, Percy A. Bryant, Warren B. Burch, Everett S. Caldemeyer, John R. Cavanagh, Francis T. Coleman, Darrell C. Crain, Robert B. Crichton, Horace H. Custis, Jr., Alva D. Daughton, George Dewey, Jack L. Derzavis, Max Feldman, Mervin W. Glover, Alfred Golden, J. Phelps Hand, Irvin Hantman, Ralph J. Haws, Herman S. Hoffman, Jay L. Hoffman, William A, Howard, Donald W. Ingham, William D. Jarman. Edward A. Kelly, Ben Klotz, Harvey F. Kreuzburg, Arthur H. Lewis, S. Arthur Linde, Philip Litvin, John Louzan, George V. Martin, Jr., Thomas E. Mattingly, Francis N. McDonald, Lee McCarthy, Ferdinand H. Mistretta, Arthur Nachlas, Paul O'Donnell, Philip O. Pelland, Marshall deG. Ruffin, G. Victor Simpson, Robert L. Simpson, William G. Sorrell, Walter Stokes and John C. Sullivan.

MEETINGS

Tuesday, Wednesday, Thursday, September 29, 30, October 1

ANNUAL SCIENTIFIC ASSEMBLY

See program elsewhere in this issue.

Wednesday, October 14

Panel Discussion on

HEALTH OF THE CIVILIAN POPULATION DURING WAR

SPEAKERS

1. For the District of Columbia: GEORGE C. RUHLAND, M.D., Health Officer for the District of Columbia (15 minutes)
2. For the United States: J. W. MOUNTIN, M.D., Assistant Surgeon General, U. S. Public Health Service (15 minutes)
3. For Montgomery County: V. L. ELLICOTT, M.D., Health Officer for Montgomery County, Maryland (5 minutes)
4. For Arlington County: RALPH G. BEACHLEY, M.D., Health Officer for Arlington County, Virginia (5 minutes)
5. For Prince Georges County: JOHN M. BYERS, M.D., Health Officer for Prince Georges County, Maryland (5 minutes)

Discussion from the viewpoint of—

Civilian Defense: JOHN A. REED, M.D., Chief of Emergency Medical Services for Civilian Defense in the District of Columbia (3 minutes)

Pediatrics: JOSEPH S. WALL, M.D., Professor of Pediatrics, Georgetown University School of Medicine (3 minutes)

The Dental Profession: DANIEL F. LYNCH, D.D.S. (3 minutes)

Wednesday, October 21

Panel Discussion on

CIVILIAN HOSPITALS AND HOSPITALIZATION DURING WARTIME

Members of the *Association of Hospital Superintendents of the District of Columbia* will speak.

There are many points of hospital administration with which the average physician and surgeon is not familiar—those necessary administrative matters which are intimately associated with the treatment of the hospitalized patient. This will be a discussion of the many perplexing problems that no medical man or hospital administrator can afford to miss!

Wednesday, October 28

Panel Discussion on

UNDULANT FEVER (BRUCELLOSIS)

Medical and veterinary authorities will participate as speakers.

Undulant fever is a disease which physicians should know much more about. It is extremely prevalent and very difficult to diagnose. It may be found in domestic animals, it contaminates many of our foods, and its methods of transmission are legion.

This is a war in which foods rival bombs in importance. Come and hear the subject discussed by medical and veterinary experts. Learn the various etiologic sources, clinical manifestations, accepted diagnostic laboratory procedures, and methods of treatment.

NEWS AND PERSONALS

The 1942 Clinical Congress of the American Congress of Surgeons, previously scheduled to meet during October at the Stevens Hotel, Chicago, will be held in Cleveland, November 17–20, with headquarters at the Cleveland Public Auditorium. This change became necessary when the United States Army Air Corps took over the hotel on August 1.

The program will be devoted to medical and surgical problems arising out of an all-out effort to win the war, emphasizing the needs of the rapidly expanding medical services of the Army and Navy. Consideration will also be given to special problems relating to civilian defense. Addresses will be made by Surgeon General James C. Magee of the Medical Corps, U. S. Army; Surgeon General Ross T. McIntire of the Medical Corps, U. S. Navy; Surgeon General Thomas Parran of the U. S. Public Health Service; Lt. Col. George Baehr, Chief Medical Officer of the U. S. Office of Civilian Defense; Dr. Frank H. Lahey, Chairman, Directing Board, Procurement and Assignment Service; Dr. Irvin Abell, Chairman of the Board of Regents of the College and Chairman of the Health and Medical Committee of the Federal Security Agency; and Dr. W. Edward Gallie of Toronto, President of the College.

The American Board of Ophthalmology announces that, because of the war emergency, the following additional examinations will be held in the near future: New York City, December 13–16, 1942; Los Angeles, January 15–16, 1943.

The 1943 written examination has been cancelled, according to the announcement. All of the subjects previously covered by the written examination will be included in the oral examination. The requirement of case reports is being temporarily dispensed with. Application blanks may be secured from the American Board of Ophthalmology, 6830 Waterman Avenue, St. Louis, Mo., and must be in the hands of the Secretary not later than November 1.

The 15th Graduate Fortnight of the New York Academy of Medicine will be held October 12–23, 1942. The program, consisting of morning panel discussions, afternoon clinics, evening lectures, scientific exhibits and demonstrations, will relate to the subject chosen for this year's Fortnight, "Disorders of the Nervous System." The registration fee is $5.00. A complete program will be mailed upon request to the Academy, Mr. Mahlon Ashford, Executive Secretary, 2 East 103rd Street, New York City.

National Hearing Week, which President Roosevelt has designated as the week of October 25–31, will be sponsored again this year by the American Society for the Hard of Hearing. In accord with the theme, "Keep Them Hearing," 160 local societies for the hard of hearing in the United States and Canada will participate in an educational program to acquaint the public with the causes of deafness and the need of guarding against them.

Dr. R. G. Beachley reports that the **Arlington County Health Department** may be able to employ a full-time physician on venereal disease work on a fee basis. Interested physicians should communicate with Dr. Beachley, Director of Health and Welfare, Court House, Arlington, Va.

Garfield Hospital is the recipient of an artificial respirator which will accommodate two children at the same time. The respirator was a gift of the Reinforced Concrete Steel Workers Union, Local 201, A.F.L. **Children's Hospital** has received a portable tub to be used in the Sister Kenny treatment of certain types of infantile paralysis. The Washington Chapter of the National Park College Alumnae Association was the donor.

The second edition of **Parergon** (from the Greek word meaning "work by the side of work"), published by **Mead Johnson & Co.**, is on display in the library of the Society's office. "Parergon" is an illustrated booklet, beautifully designed and executed, reproducing artistic accomplishments of members of the American Physicians' Art Association. Included in this edition is a photograph entitled "Highbrow," by **Dr. Leslie H. French,** and a water color, "End of the Storm, Lake Memphremagog," by **Dr. Ethel C. Dunham,** both members of the Society.

The original medical doctors' art works were exhibited at the Annual Session of the American Medical Association in Atlantic City in June. The exhibit drew praise from all who saw it. Any medical doctor in the United States or Canada may become a member of the American Physicians' Art Association for one year by sending a check for $2.00 to the Association, Francis H. Redewill, M.D., Secretary, Flood Building, San Francisco, Calif.

BOOKS RECEIVED FOR REVIEW

Acknowledgment is made of the following books which have recently been received for review:

Clinics. Symposium on Burns and Shock, Vol. 1, No. 1. Edited by George Morris Piersol, M.D., Professor of Medicine, Graduate School of Medicine, University of Pennsylvania, Philadelphia, with 16 collaborators. Successor to The New International Clinics. Bi-monthly. Year's subscription $12.00, single copy $2.00. Philadelphia: Lippincott, June 1942.

Central Autonomic Regulations in Health and Disease. Heymen R. Miller, M.D., Associate Attending Physician, Montefiore Hospital, New York City. Pp. 430, with 64 illustrations. Price, cloth, $5.50. New York: Grune and Stratton, 1942

Standard Nomenclature of Disease and Standard Nomenclature of Operations, revised edition. Edited by Edwin P. Jordan, M.D. Pp. 1022. Chicago: American Medical Association, 1942.

The Care of the Aged (Geriatrics), 4th ed. Malford W. Thewlis, M.D., Attending Specialist, General Medicine, U. S. Public Health Hospitals, New York City; Attending Physician, South County Hospital, Wakefield, Rhode Island; Special Consultant, Rhode Island Department of Public Health. Pp. 589. Price, cloth, $7.00. St. Louis: Mosby, 1942.

War Medicine: A Symposium. Edited by Winfred Scott Pugh, M.D., Commander, M.C., U.S.N., Retired: formerly Surgeon, City Hospital, New York. Pp. 565. Price, cloth, $7.50. New York: Philosophical Library, 15 East 40th St., 1942.

Emergency Care. Marie A. Wooders, B.S., R.N., Principal, School of Nursing, Hackensack Hospital, Hackensack, New Jersey; and Donald A. Curtis, M.D., Lieutenant-Colonel, Medical Reserve, Commanding 342nd Medical Regiment, U. S. Army; Instructor in Military Nursing, Hackensack Hospital, Hackensack, New Jersey. Pp. 560, with 201 illustrations. Philadelphia: Davis, 1942.

BOOK REVIEWS

The Toxemias of Pregnancy, William J. Dieckmann, M.D., Associate Professor of Obstetrics and Gynecology, University of Chicago; Attending Obstetrician, Chicago Lying-in Hospital and Dispensary; Attending Gynecologist, Albert Merrit Billings Memorial Hospital of the University of Chicago; Associate Editor of the American Journal of Obstetrics and Gynecology; Co-chairman of the Conference on Eclampsia, U. S. Department of Labor, Children's Bureau, 1941. Pp. 509, with 50 illustrations and 3 color plates. Price, cloth, $7.50. St. Louis: Mosby, 1941.

The author has written this book with two objectives in mind: "(1) to acquaint the obstetrician with some of the recent contributions on physiology pertaining to obstetrics; (2) to acquaint the investigator, untrained in obstetrics, with some of the physiology and pathology of obstetrics." The result of his attempt to accomplish these objectives is a very complete monograph which serves the additional purpose of a valuable reference.

At times the author's obvious desire to make his work as complete as possible leads to some repetition and to the accumulation of references which are so numerous that they are occasionally tiresome. Furthermore, portions of the book, particularly the sections which include discussions of the altered physiology of pregnancy, would be greatly improved by summarization and critical appraisal. The author's practice of presenting many divergent viewpoints without guiding comment or criticism is sometimes confusing to the reader. For the most part, however, the book is tremendously stimulating and should provide a powerful impetus to further study of the toxemias of pregnancy. It is certainly to be recommended as an addition to the library of all who are interested in the subject.

H. H. H.

Immunology, 2nd ed. Noble Pierce Sherwood, Ph.D., M.D., F.A.C.P., Professor of Bacteriology, University of Kansas, and Pathologist to the Lawrence Memorial Hospital, Lawrence, Kansas. Pp. 639, with 27 illustrations and 7 color plates. Price, cloth, $6.50. St. Louis: Mosby, 1941.

The second edition of Dr. Sherwood's book evidently has been thoroughly and carefully revised. The important advances in the field of immunology since 1935, when this book was first published, have been added, including new chapters on the reticulo-endothelial system and serum reactions. The author has obviously retained his original intention to present the facts of immunology in correlation with the other basic medical teachings. The simplicity of presentation, the clarity of style, and the inclusion of lists of references, further improve the value of the book, particularly for students.

The methods used in printing the book obviously are intended to assist the student in outlining the material. The illustrations, tables and indices are carefully executed.

H. H. H.

Nutritional Deficiencies; Diagnosis and Treatment. John B. Youmans, A.B., M.S., M.D., Associate Professor of Medicine and Director Postgraduate Instruction, Vanderbilt University Medical School, Nashville, Tenn. Pp. 385, with 16 illustrations. Price, cloth, $5.00. Philadelphia: Lippincott, 1941.

This book admirably fills the need for condensation and correlation of the many recent developments in the field of clinical nutrition. The author has wisely omitted material which lacks clinical application, thereby improving the utility of his work for the practicing physician.

As might be expected the discussion of vitamin deficiency diseases occupies the major place in the book, but there are also excellent chapters on protein, iron, and iodine deficiency. The emphasis given to "subclinical" deficiency states is commendable. The latter part of the book includes a tabular summary of the vitamins, a list of the principal dietary sources of the essential food factors, a summary of the important laboratory methods for diagnosing deficiency diseases, and an index. The entire text is clearly written, capably organized, and well printed.

M. M.

SAMUEL EVANS WATKINS, M.D.
(1871–1942)

Dr. Samuel Evans Watkins, a Life Member of the Medical Society of the District of Columbia, died August 19, 1942, at his residence, 1448 Harvard Street, N.W.

Dr. Watkins was born February 11, 1871, in Washington, the son of Louis and Emily H. Evans Watkins. After graduating from Emerson Institute in Washington in 1888, he studied medicine at Georgetown University School of Medicine, receiving his degree in 1892. He continued his medical education at the New York Post-Graduate Medical School. From 1892 to 1896, he was instructor in dermatology and genitourinary diseases at Georgetown University and Emergency Hospital.

Dr. Watkins became affiliated with the Medical Society of the District of Columbia in 1894. Life Membership was conferred upon him on January 1, 1935. He was also a member of the American Medical Association, Academy of Sciences of the District of Columbia, Sons of the American Revolution, Potomac Lodge No. 5, F.A.A.M., and the Royal Arcanum. For many years he was medical examiner for both the Acacia Mutual Life Insurance Company and the Royal Arcanum.

Surviving are his wife, Mrs. Mary Campbell Watkins; a son, Kennedy Campbell Watkins, and two sisters, Miss Catherine R. Watkins and Mrs. W. C. Prentiss, all of Washington.

GLENN IRVING JONES, M.D.
(1883–1942)

Colonel Glenn I. Jones, Chief Surgeon of the Southern Railway Service since 1937, died July 18 on a train en route from New Orleans to Washington. He resided at 5516 Moorland Lane, Edgemoor, Md.

Colonel Jones was born in Washington, D. C., November 25, 1883. He graduated from George Washington University School of Medicine in 1905, and joined the Army Medical Corps after a few months of private practice. He continued his career in the Army until his retirement in 1936.

Colonel Jones was for many years personal physician to General Pershing. During the World War he commanded the base hospital at Camp Devens, Mass., and organized and commanded the base hospitals at Aberdeen Proving Grounds and Edgewood Arsenal, Md. Immediately following the war he was stationed at Coblenz, Germany, with the American Army of Occupation. He was sent to Russia when the Hoover Relief Administration needed physicians to combat epidemics following the war. Returning to the United States in 1923, he accompanied General Pershing on a mission to Peru and Chile in connection with a boundary dispute.

In 1928 he was graduated from the Army War College and became Executive Officer of the Medical Field Service School at Carlisle, Pa. Graduating from the School of Aviation Medicine in 1930, he served for four years as Medical Director of the Army Air Corps, and for the last few months before his retirement, as Chief Surgeon at Hamilton Field in California. He was awarded the Distinguished Service Medal for his World War service.

Colonel Jones held fellowship in the American Medical Association and the American College of Surgeons.

Surviving are his wife, Mrs. Elizabeth Morgan Jones; two brothers, William and Fletcher Jones; and two sisters, Mrs. Ada Corder of Denver, Colo., and Mrs. William Hendershot of Hartford, Conn.

CORRESPONDENCE

Washington, D. C., August 14, 1942

Editor
Medical Annals of the District of Columbia
Washington, D. C.

Dear Sir:

I would greatly appreciate it if you would publish the following note in the forthcoming issue of the Annals:

> The article entitled The Influence of the Bacterial Flora on the Cultivation of Endamoeba Histolytica published in the Annals in June, 1942 was a summary of the completed work published under the same title by B. D. Chinn, Leon Jacobs, L. V. Reardon and C. W. Rees (National Institute of Health and St. Elizabeths Hospital) in the American Journal of Tropical Medicine, Vol. 22, No. 2, March, 1942.
>
> It is regretted that this note was not submitted with the summary for publication.

I hope this note will be published in an early issue.

Very truly yours,
Ben D. Chinn, M.D.

(*Continued from page 341*)

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(*Continued from page 348*)

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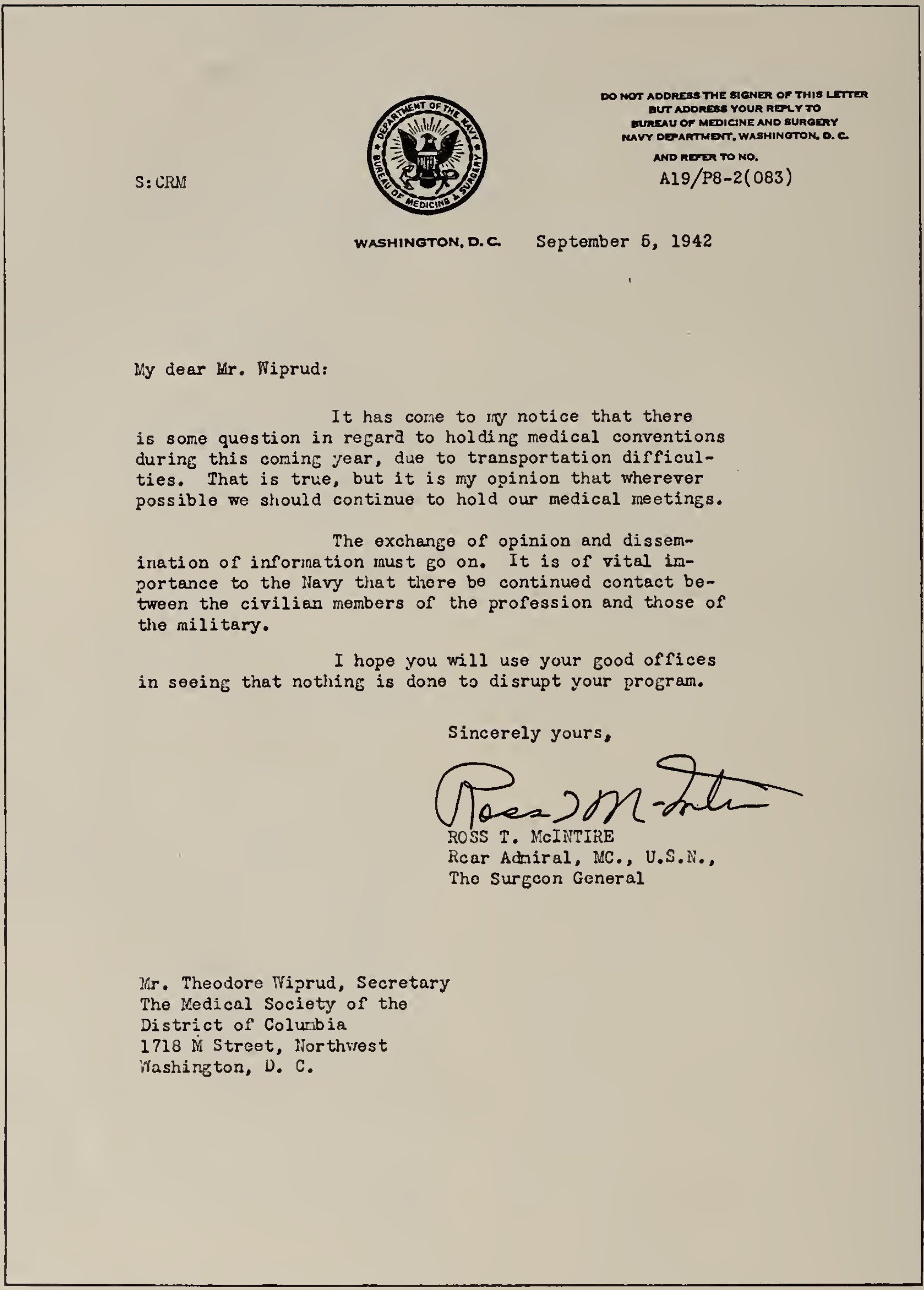
(*Continued from page 365*)

of the Indiana State Medical Association, described on its cover as a Wartime Industrial Health Number, is deserving of high commendation. An unusual number of able and distinguished writers have contributed, including widely known authorities in the industrial field. Editors of the *Journal* are to be commended on the comprehensive scope of articles contained in this issue, and their timeliness.



DO NOT ADDRESS THE SIGNER OF THIS LETTER
BUT ADDRESS YOUR REPLY TO
BUREAU OF MEDICINE AND SURGERY
NAVY DEPARTMENT, WASHINGTON, D. C.
AND REFER TO NO.
A19/P8-2(083)

S:CRM

WASHINGTON, D. C. September 5, 1942

My dear Mr. Wiprud:

It has come to my notice that there is some question in regard to holding medical conventions during this coming year, due to transportation difficulties. That is true, but it is my opinion that wherever possible we should continue to hold our medical meetings.

The exchange of opinion and dissemination of information must go on. It is of vital importance to the Navy that there be continued contact between the civilian members of the profession and those of the military.

I hope you will use your good offices in seeing that nothing is done to disrupt your program.

Sincerely yours,

Ross McIntire

ROSS T. McINTIRE
Rear Admiral, MC., U.S.N.,
The Surgeon General

Mr. Theodore Wiprud, Secretary
The Medical Society of the
District of Columbia
1718 M Street, Northwest
Washington, D. C.

MEDICAL ANNALS
of the
DISTRICT OF COLUMBIA

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THE USE OF SUCCINYLSULFATHIAZOLE IN THE TREATMENT OF AMEBIASIS

Preliminary Report

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First Lieutenant, Medical Corps, United States Army
J. LAWN THOMPSON, JR., M.D.
Captain, Medical Corps, United States Army

SUCCINYLSULFATHIAZOLE,* a new chemotherapeutic agent, was introduced for clinical use by Poth and Knotts[1] in February 1942. They showed at that time that this drug was poorly absorbed from the gastrointestinal tract, that it produced profound changes in the bacterial flora, and that it had bacteriostatic properties. It was further shown[2] that the drug is hydrolized in the intestinal tract to form free sulfathiazole in concentrations sufficiently high to be locally bacteriostatic and without enough absorption to produce any appreciable amount in the blood stream. Urinary excretion was found to average less than 5 per cent of the ingested drug. This amount of absorption and excretion was less than that reported for sulfaguanidine,[3] thereby suggesting that it is potentially less toxic than sulfaguanidine. This suggestion was further substantiated by the statement of Kirby and Rantz,[4] who said, "Two of the typhoid carriers who suffered from severe nausea, vomiting, and headache while taking sulfaguanidine experienced no discomfort whatever during succinylsulfathiazole administration." Lyon[5] states that in his "admittedly small series of cases succinylsulfathiazole appeared to have all the virtues of sulfaguanidine as to therapeutic efficacy and as to the freedom from untoward effects." In the original study and during subsequent observation on humans[6] which now total over 250 patients, it can be stated that no severe reactions have yet been observed.

Subsequent reports by Kirby and Rantz[4] on the use of succinylsulfathiazole in the treatment of typhoid and dysentery carriers showed it to have no bacteriostatic effect upon typhoid bacilli but that dysentery bacilli could be eliminated in these carriers. The lack of effect upon typhoid bacilli has also been noted by Poth and Knotts.[7]

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* The succinylsulfathiazole (sulfasuxidine) used in these cases was furnished by Sharp & Dohme of Philadelphia, Pa.

Because observations on this drug have shown that (a) the flora of the gastrointestinal tract is profoundly altered by it, (b) it has definite bacteriostatic action in vivo, (c) absorption from the gastrointestinal tract is poor, (d) severe toxic reactions have not been encountered, and (e) its effects on bacillary dysentery is marked, it was therefore felt that succinylsulfathiazole might be effective and desirable in the treatment of amebic dysentery, because the drugs now used (carbarsone, emetine, etc.) have definite toxic properties.

The mode of action is not clear. It is doubtful that succinylsulfathiazole has any direct action against the ameba per se. It may, however, be that the drug acts to modify the secondary bacterial flora, thereby aiding in the healing of the ulcers and so supporting the host that it may be able to overcome the amebic infection.

In the following cases of amebiasis the diagnosis was made by stool examinations and proctoscopy. Repeated proctoscopic examinations were made on each patient during the course of the treatment in order to follow the progress of healing of the bowel mucosa.

The criteria for apparent cure of these cases was (a) 4 negative stool examinations, 5 days apart, following administration of magnesium sulfate, and (b) negative proctoscopic examination at the conclusion of treatment.

REPORT OF CASES

Case 1. W. R. F., aged 30, was admitted to the hospital complaining of pain in the right flank that had been present intermittently for the past 8 or 9 years. Appendectomy had been done 1 month prior to this admission without relief of symptoms. Stool examinations showed E. histolytica cysts and trophozoites as well as Strongyloides stercoralis. Proctoscopic examination showed typical ulcers of amebic dysentery. Succinylsulfathiazole was given and the first negative stool was obtained 7 days later. Proctoscopic examination done at this time showed complete healing of the ulcerated areas. The Strongyloides stercoralis was not eradicated by the succinylsulfathiazole. This parasite has been resistant to this drug in several other cases in which it has been used.

Case 2. C. B. G., aged 30, was admitted to the hospital with jaundice, as evidenced by a marked icteric tint to the skin and sclerae, and an icteric index of 75. This case was typical of the vast number seen during the past months in the Army, the etiology of which has not been clarified. During his stay in the hospital, he complained of generalized abdominal pain which he stated had been present frequently in the past. Stool examination revealed cysts of E. histolytica, and proctoscopic examination showed many lesions in the lower bowel which had the characteristics of amebic ulcerations. Succinylsulfathiazole was started, despite an icteric index of 150, and from the date of starting the drug consistently negative stool examinations were obtained. Proctoscopic examination then revealed healing of the previously ulcerated mucous membrane.

It is felt that this case is particularly important because the succinylsulfathiazole was given without harmful effects to a patient who had evidence of liver damage as shown by an icteric index of 150. Sulfonamides have been withheld in the past in cases of liver disease because they were considered as possibly being hepatotoxic. Recent work by Machella and Higgins[8] is evidence toward refuting this. We believe this case is further evidence in the same direction. Sixteen days after starting succinylsulfathiazole, which was given for 10 days, the icteric index was 50 and a marked clinical improvement was noticed.

Case 3. T. R. S., aged 20, was admitted to the hospital complaining of pain in the right lower abdomen which had been present intermittently for the past year but which had become aggravated during the past 2 days. Stool examinations were positive for Necator americanus for which enteric-coated capsules of tetrachlorethylene were given. Stools were then negative for Necator americanus for 3 weeks, but trophozoites and cysts of E. histolytica then were reported. Proctoscopic examination revealed ulcerated lesions of the lower bowel. Succinylsulfathiazole was instituted, and the stools were consistently negative thereafter. Subsequent proctoscopic showed complete healing of the ulcerations.

Case 4. C. C. C., aged 20, was admitted to the hospital complaining of an ulceration of the plantar surface of the left foot. A history of long-standing, vague, abdominal discomfort was obtained. A stool examination showed trophozoites and cysts of E. histolytica. Proctoscopic examination did not reveal ulcerations, but the mucous membrane was glazed and granular. Succinylsulfathiazole was started and negative stools were then repeatedly found. Subsequent proctoscopic examination revealed the mucous membrane to be normal.

Case 5. P. E. L., aged 22, was admitted complaining of generalized weakness, headaches, and "sickness at the stomach" for the past 5 years. Stool examinations revealed trophozoites and cysts of E. histolytica. Proctoscopic examination showed few ulcerations but a mucous membrane that was edematous and granular. Succinylsulfathiazole was started, and negative stools were obtained thereafter. Proctoscopic examination then revealed an essentially normal lower bowel.

Case 6. C. D. B., aged 37, was admitted to the hospital complaining of "weakness in the stomach and legs." With this was associated left lower quadrant aching and a history of intermittent diarrhea for the past 5 months. Stool examination was positive for E. histolytica and Chilomastix mesnili. Proctoscopic examination revealed amebic ulcerations that were characteristic. Succinylsulfathiazole was started, and the stools became negative for E. histolytica but the Chilomastix mesnili remained. Upon discharge the proctoscopic examination was considered negative.

Method of Treatment

When the diagnosis of amebiasis had been made by laboratory and by proctoscopic examinations, the patient was placed in isolation on a low residue, high caloric diet. No mineral oil or cathartics were given during the 10-day course of treatment. Stool specimens were then taken every 4 days for microscopic examination. An initial dose of 8 grams of succinylsulfathiazole was given and repeated after 4 hours, after which the maintenance dosage was calculated on a basis of 0.2 Gm. per Kg. of body weight per day divided into 6 equal parts and given orally every 4 hours. Along with this was given 1 Gm. of calcium carbonate with each dose. The calcium carbonate was given because reports by Schmelke[9] show that the activity of the sulfonamides is directly proportional to the pH of the medium in which it is acting. The alkaline medium would therefore enhance the possible amebicidal property of succinylsulfathiazole. The cases were arbitrarily treated for 10 days, after which the drug was discontinued. Routine blood levels were not taken because it has been previously shown[2] that absorption is minimal.

Summary

1. Six cases of proved amebiasis were treated with succinylsulfathiazole.
2. Calcium carbonate was used in combination to produce an alkaline medium in the bowel to enhance the action of the succinylsulfathiazole.
3. No toxic reactions were noted.
4. All cases were apparently cured.
5. Marked subjective relief was obtained in all cases.
6. Succinylsulfathiazole used in a case of severe jaundice had no apparent deleterious effect on the liver.
7. Chilomastix mesnili and Strongyloides stercoralis are apparently unaffected by succinylsulfathiazole.
8. Although the cases are few, further investigation is warranted.

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THE SURGICAL TREATMENT OF LYMPHOGRANULOMA INGUINALE (LYMPHOPATHIA VENEREUM) OF THE RECTUM

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Assistant Professor of Surgery, Georgetown University School of Medicine
LOUIS J. GOFFREDI, M.D.
Washington

PRIOR to the use of the Frei antigen in the diagnosis of lymphogranuloma inguinale, benign rectal strictures were commonly considered as syphilitic, gonorrheal or tuberculous. It has become evident, however, that almost 100 per cent of these lesions are the result of lymphatic extension of a specific virus from the primary genital lesion of lymphogranuloma inguinale.

Since this disease is more prevalent among negroes, we have been afforded an opportunity to study a large number of these cases on the proctologic service at Providence Hospital during the past 3 years. Females were affected more often than males in the ratio of 8:1. The average interval between the development of the primary lesion and the occurrence of rectal symptoms was 3 years. Obstipation, painful defecation, and the passage of sanguinopurulent discharge were the most frequent complaints.

The extent of anorectal involvement varies from a moderately severe proctitis, limited to the lower third of the rectum, to extensive stricture formation of almost the entire rectum. Usually a tubular stricture, admitting the tip of the examining finger, is encountered about 4 cm. above the anus. Infrequently a diaphragmatic stricture, less obstructive than the tubular variety, develops. Sigmoidoscopic examination of the bowel proximal to the stricture reveals the common occurrence of proctitis, usually ulcerative and occasionally polypoid, of variable severity and extent. Ischioanal abscesses, fistulae in ano, and perianal condylomas are conspicuous associated lesions.

Early in our experience in the handling of these unfortunate individuals it became evident that the type of therapy should depend upon the extent and severity of the rectal involvement. The encouraging report of Hebb, Sullivan and Felton[1] on the use of sodium sulfanilate in the treatment of lymphopathic stricture of the rectum led us to use this drug in all cases for a period of 9 months. Although the less severe cases showed definite systemic and local improvement, we concluded that this chemotherapy failed to benefit the advanced strictures. Instrumental dilatation and proctotomy have, in our opinion, little to recommend them as therapeutic measures. The associated trauma eventuates in more cicatrization and narrowing of the already scarred rectum, and in addition severe systemic reactions not infrequently follow. For those cases with advanced stenosis of the rectum and for those showing extensive ulcerative proctitis and sigmoiditis above the stricture we formerly created a double-barrel colostomy of the upper sigmoid. This palliative measure was followed by improvement in the general condition of these debilitated individuals, but they continued to show evidence of toxic absorption from the diseased bowel. The inadequacy of this type of colostomy was well demonstrated in several cases in which the upward extension of the disease involved the stoma of the artificial anus, necessitating the creation of another colostomy.

Case 1. L. T., a white female, aged 58, was seen in the proctologic clinic, July 11, 1940. Three years previously a left inguinal colostomy had been established elsewhere for a rectal stricture. On admission she complained of colicky pain about the colostomy. Examination revealed the presence of a severe stricture 4 cm. above the anus with marked ulcerative proctitis extending above the rectosigmoid. The double-barrel colostomy was so narrowed that its stoma barely admitted a small catheter. The Frei test was positive. On August 22, 1940, she was admitted to Providence Hospital, where a plastic repair of the strictured colostomy was attempted. However, it was found that not only the stoma but also both loops of the colostomy were thickened and narrowed, and consequently a new transverse colostomy was established. Since then she has been symptomatically improved.

Another case is cited to illustrate this tendency of the disease to ascend and involve higher segments of the large bowel. The postoperative complication that was responsible for this sole fatality in our series is noteworthy.

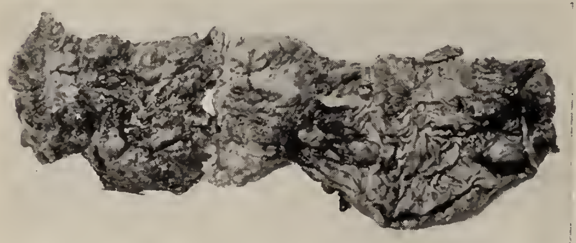
Case 2. R. J., a colored female, aged 29, was admitted directly to Providence Hospital on March 3, 1942. For 11 years she had complained of tenesmus and rectal bleeding. For 3 days prior to admission she had suffered from generalized abdominal pain and obstipation. On examination a firm tubular stricture was encountered 6 cm. above the anus, above which feces was impacted. After proper preoperative preparation of her colon, she was operated upon under spinal anesthesia. It was found that the inflammatory process had involved the sigmoid and distal two thirds of the descending colon. In anticipation of a subsequent resection, the bowel and its mesentery were divided above the upper limit of the inflammation. The distal end of the divided bowel was inverted, and the proximal end was brought out of the abdomen as a single-barrel colostomy. She remained afebrile and appeared in good condition until the 6th postoperative day when she commenced to complain of severe paroxysmal abdominal pain. Although the colostomy failed to function it readily admitted the passage of a rectal tube. On the 8th postoperative day distention of the right colon was conspicuous. We belatedly recognized the existence of a closed loop obstruction involving the right and transverse colon, and immediately carried out a cecostomy under local anesthesia. Remarkably great pressure was relieved when the paper-thin cecal wall was pierced. In spite of copious drainage from the cecostomy tube the patient's condition failed to improve, and she expired 14 hours later. Necropsy revealed the presence of necrosis and perforation of the wall of the cecum with early generalized peritonitis.

In spite of our conviction that radical excision of the diseased bowel in these advanced cases was desirable, we hesitated to attempt intraperitoneal resection in the presence of extensive inflammation of the rectosigmoid and the other tissues of the pelvic floor. That such a procedure is associated with a prohibitively high mortality has been the experience of others.[2, 3] In order to avoid this danger of intraperitoneal infection, colostomy followed by posterior resection of the rectum was employed. This operative procedure is advised by the majority of surgeons.[4, 5, 6]

Case 3. E. T., a colored female, aged 33, was seen in the proctologic clinic on March 18, 1939. She had suffered from marked constipation, tenesmus, and the passage of blood per rectum for 4 years. Examination of this emaciated female revealed the presence of a firm stricture 6 cm. above the anus through which a stricture sigmoidoscope was passed with difficulty. The Frei test was strongly positive. Little improvement followed repeated dilatation of the stricture, and on August 23, 1939, a double-barrel sigmoid colostomy was made. During the following 16 months her condition improved, but bloody rectal discharge continued and arthritis of both knees developed. Sodium sulfanilate was administered uninterruptedly for 5 months. On January 30, 1941 she was readmitted to Providence Hospital, and through a Kraske incision the rectum was resected and the rectosigmoid was closed as a blind pouch. The posterior wound failed to completely heal until May, 1941, and 1 month later it broke down and fecal drainage persisted for 6 weeks. A small fistula in this region continues to drain.

Our experience with this case led us to the conclusion that posterior resection fails to completely remove the diseased bowel. The blind loop between the colostomy and the inverted rectosigmoid may constitute a source for further extension of the disease, and as happened in this instance, leakage from this loop may result in persistent drainage from the posterior wound.

Since the ascending spread of the lymphopathic colitis is probably a combination of direct mucosal extension and lymphatic extension, the first desideratum in limiting this process is complete division of the colon and its mesocolon above the involved area. This surgical maneuver was carried out in several cases, inverting the distal stump and bringing the proximal end out of the abdomen as a single-barrel colostomy. Although these individuals exhibited more satisfactory improvement than those in whom a double-barrel colostomy was used, annoying rectal discharges continued. It was finally decided to attempt a combined abdominoperineal resection several months after the establishment of such a single-barrel colostomy. To our surprise and gratification the extensive edema and inflammation that was observed at the time of the initial laparotomy had subsided. Resection of the sigmoid and rectum was completed without unusual technical difficulty, and recovery of the patient was uneventful. Since then, 5 additional resections have been carried out in a similar manner with equally good results.



Courtesy of U. S. Army Medical Museum

Fig. 1. Specimen from case 4, showing involvement of entire rectum. The upper part of the specimen was removed from above.

Case 4. M. P., a colored female, aged 35, was seen in the proctologic clinic, August 8, 1941. She had complained of painful defecation for 3 years. Rectal bleeding was inconspicuous. On examination an extensive tubular stricture involving the lower third of the rectum barely admitted the tip of the examining finger. The Frei test was positive. On August 25, 1941 a single-barrel colostomy was established in the upper sigmoid. At the same time a subtotal hysterectomy for multiple fibromyomata was carried out. She was discharged 2 weeks later after a mild convalescence. She was readmitted to Providence Hospital, and on October 20, 1941 a combined abdominoperineal resection of the rectum and lower sigmoid was completed. It was necessary to remove part of the sigmoid transabdominally since it was impossible to close the pelvic peritoneum over the entire loop (fig. 1). Following a remarkably uneventful postoperative course she was discharged on the 17th postoperative day. Healing of the posterior wound was completed 3 months later. When examined, July 18, 1942, she had gained 22 pounds and had returned to a useful occupation.

Case 5. R. N., a colored female, aged 25, was seen in the proctologic clinic on January 2, 1941, complaining of a "draining abscess" in the anal region. Examination revealed the presence of several fistulae in ano, and at 5 cm. above the dentate line an almost completely obstructing stricture was palpated. The Frei and Kahn tests were positive. She was given antiluetic therapy for 4 months, during which time sodium sulfanilate was administered. No alteration of the rectal lesion was observed. On May 7, 1941, a single-barrel colostomy was performed at Providence Hospital under spinal anesthesia. The rectosigmoid and lower sigmoid were described as being "indurated, thickened, and adherent to the adjacent structures." After leaving the hospital on the 12th day postoperatively, she continued on sulfanilate therapy for 6 months. On November 19, 1941, an abdominoperineal resection of the lower sigmoid and extensively diseased rectum was carried out (fig. 2). Convalescence was uneventful, and on February 19, 1942, the posterior wound was found to be completely healed.

Case 6. H. H., a colored female, aged 30, was admitted to Providence Hospital on December 26, 1939 complaining of obstipation of 6 days' duration. During the preceding 2 years she had received several courses of tartar emetic intravenously for a lymphopathic stricture of the rectum. A very advanced stricture of the lower third of the rectum was found. At laparotomy the inflammation was found to extend up to the mid-sigmoid, below which the regional lymph-nodes were conspicuously enlarged. Following the creation of a single-barrel colostomy she received sodium sulfanilate therapy for 1 year. During this time the condition of the stricture remained unchanged. She was readmitted to the hospital, and on February 13, 1942, the lower loop was resected (fig. 3). Extensive perirectal scarring necessitated excision of a segment of the posterior vaginal wall. Her postoperative course was marked by infection of the abdominal incision. In 7 weeks the posterior wound was completely healed.

Case 7. R. J., a colored female, aged 54, was first seen in the proctologic clinic on July 15, 1939, complaining of a sense of fulness in the rectum, tenesmus, and passage of blood per rectum. She was very emaciated, and the hemogram showed the presence of a profound secondary anemia. On sigmoidoscopic examination an unusually severe ulcerative process of the rectum and lower sigmoid was noted. Some narrowing of the lower rectum was evident but no definite stricture was present. In spite of intensive medical treatment, including transfusions, sodium sulfanilate, and iron therapy, her debility was not appreciably improved because of the continued rectal bleeding. On January 30, 1942, a single-barrel colostomy was performed, and 5 months later the diseased bowel was successfully resected. The posterior wound was completely healed after 10 weeks, at which time her anemia was considerably improved.

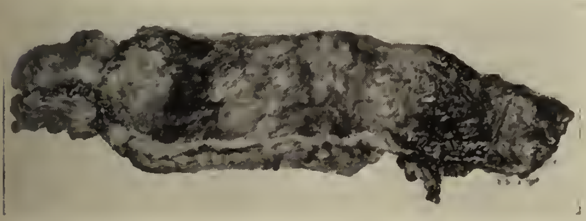


Fig. 2. Specimen from case 5, showing a severe stricture of the lower rectum.

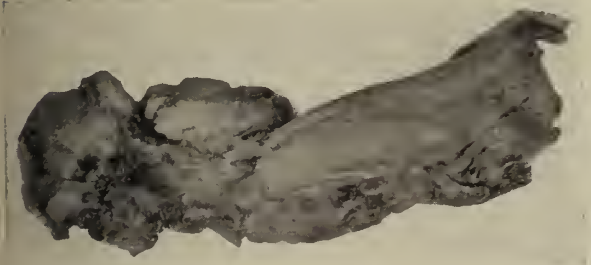


Fig. 3. Specimen from case 6, showing an advanced stricture and involvement up to the rectosigmoid.

Case 8. N. S., a colored female, aged 37, when first seen in the proctologic clinic complained of a bloody diarrhea of 3 months' duration. A firm stricture was present 6 cm. above the anus. On the left rectal wall a nodular mass, measuring 2 by 3 cm. was palpated, biopsy of which was reported as showing no evidence of malignant change. Multiple fistulae in ano were present. The Frei test was strongly positive. Two months after the establishment of a single-barrel colostomy a combined abdominoperineal resection was carried out. Drainage from the posterior wound continued for 2 months.

Case 9. C. C., a colored female, aged 28, was seen in the proctologic clinic on July 11, 1940 because of a fistula in ano of 3 months' duration. On rectal examination an advanced stricture of the lower third of the rectum was encountered. A fistulectomy was performed on July 30, 1940. In spite of intensive sodium sulfanilate therapy for the next 15 months, the rectal stricture became more pronounced. A single-barrel colostomy was made on February 26, 1942, and 4 months later the rectum and lower sigmoid were resected. Examination of this patient on August 20, 1942 revealed incomplete healing of the posterior wound.

Although generalizations cannot be drawn from this small group of cases, it would appear that resection of the diseased bowel in lymphogranuloma inguinale can be accomplished with a relatively low mortality by a 2-stage abdominoperineal operation. No extravagant claims of cure are made in these cases, but it is our conviction that eradication of the disease locally offers a reasonably good chance that further involvement of the bowel will be prevented.

SUMMARY

The treatment of lymphogranuloma inguinale of the rectum varies with the extent and intensity of the disease. Sodium sulfanilate therapy is recommended in mild early cases. In the advanced cases with marked stricture formation and severe ulcerative proctitis and sigmoiditis, resection of the diseased bowel by a 2-stage abdominoperineal operation is recommended. This procedure was successfully employed in 6 cases.

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(*Continued on page 418*)

THOROTRAST HEPATOSPLENOGRAPHY AS A DIAGNOSTIC AID IN SOLITARY LIVER ABSCESS

Report of Four Cases

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DURING the past six years four cases of solitary liver abscess have been diagnosed at Georgetown University Hospital by means of Thorotrast hepatosplenography. This method was developed by Oka and Radt in 1929, and makes use of roentgenographic examination of the liver and spleen following the intravenous administration of a stabilized colloidal solution of thorium dioxide manufactured under the name of Thorotrast.* When this material is introduced into the blood stream it is rapidly removed and engulfed by the cells of the reticuloendothelial system. As the liver and spleen contain these cells in greatest concentration, these organs will contain the greatest amount of Thorotrast. By virtue of its high molecular weight thorium dioxide is radiopaque and thus serves as a contrast medium. In a Thorotrast hepatosplenogram normal liver tissue appears of a homogeneous density about equal to that of the vertebrae, the spleen about the same density as the ribs. Since a liver abscess is a circumscribed area of pus containing necrotic hepatic tissue and is devoid of active reticuloendothelial cells, it will contain none of the Thorotrast and will be of lesser density than surrounding normal liver tissue on a roentgen film. In this manner a solitary liver abscess is easily demonstrated and precisely located. Neoplasm and cyst are the only lesions that need to be differentiated, and this is usually easy. The commonest neoplastic lesions of the liver are metastatic carcinomata which are frequently multiple. They appear as areas of lessened opacity with a clear-cut edge and often with a halo of condensed liver tissue. Solitary tumors of the liver are rare but present the same roentgenographic features as metastatic growths. The same is true of echinococcus cyst. The outline of an abscess is not sharply demarcated, but has a fuzzy appearance and blends with the adjacent liver parenchyma.

The amount of Thorotrast necessary to secure good hepatosplenograms varies to some extent with the size of the patient, but the average adult usually is given 75 c.c.; a small individual may require considerably less. As a guide, the amount may be calculated on the basis of 0.5 c.c. per pound of body weight. In the past the total amount has been given usually in divided doses over a three-day period, and the films made on the fourth day. Studies of the rate of deposition of Thorotrast[1] have shown that most of this material is removed from the blood stream during the first 15 minutes following injection. More recently Yater has been giving the total amount in one injection, and films have been made in from one to three hours with excellent results.

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* Marketed by the Heyden Chemical Corporation, New York.

In making the injection, it is important to avoid infiltration of the subcutaneous tissue since Thorotrast remains there and in time produces unsightly hard nodules which may become painful and require excision. This is not serious, however, as histologic examination of such excised nodules has revealed the subcutaneous tissue reaction to be only of fibrous response such as would occur in the case of any other foreign body.[2] To obviate this mishap Thorotrast can be diluted to several hundred c.c. and given by the gravity method, as it is miscible with physiologic saline in all dilutions. In this way it can be ascertained that the needle is entirely within the vein before the Thorotrast is added to the flask. It provides the further safeguard of having the Thorotrast well diluted in case infiltration should occur. In a large number of cases with this method no accident has occurred.

REPORT OF CASES

Case 1. This case was reported by Yater and Cavanagh[3] in the *Annals of Internal Medicine* and is reviewed here only briefly. The patient was a 38-year-old white man who entered Georgetown University Hospital on July 24, 1936. His past history was noncontributory. On May 10, 1936, he developed a severe attack of pain in the right upper quadrant of the abdomen which radiated to the right axilla. After a few days the pain was greatly diminished. Six weeks before admission the pain became worse and fever was first noted. The pain then was described as sharp and stabbing, beginning to the right of the umbilicus and radiating to the right costal margin. There was also a dull constant ache in the right lumbar region. Intermittent vomiting occurred, and a loss of 40 pounds resulted. A chill occurred the day before admission. There were no bowel disturbances.

On admission the patient appeared seriously ill. There was no jaundice. The temperature was 101°F., the pulse rate 100, and the respiratory rate 22 per minute. The essential findings were hepatomegaly and marked tenderness over the right lobe, the edge of which was rounded and extended about 6 cm. below the right costal margin. The hemogram revealed a marked hypochromic anemia with a high granulocytic leukocytosis. Repeated stool examinations were normal. Other laboratory studies gave negative results.

The patient's condition became progressively worse, and was aggravated by bronchitis. A moderately severe, irregular fever persisted, ranging from 98° to 103°F. The clinical findings strongly suggested the diagnosis of hepatic abscess, but it was decided to have roentgenographic evidence before instituting surgical measures. Accordingly, 75 c.c. of Thorotrast was administered intravenously over a 3-day interval. The hepatosplenogram revealed an area of decreased density in the lower portion of the right lobe of the liver. The diagnosis of liver abscess was made. The liver was explored surgically, and a soft rounded mass about the size of an orange was found projecting from the under surface of the right lobe. About 150 c.c. of thick, reddish brown pus was aspirated, and a large rubber drainage tube was placed in the abscess cavity, through which pus continued to drain in diminishing amount. Amebae could not be demonstrated in the pus, but a course of injections of emetine hydrochloride was given. On the 10th postoperative day the tube was removed, and the wound slowly healed. The irregular fever continued for 3 weeks after operation, when the temperature became normal. The patient was discharged as recovered on the 40th day after operation.

Case 2. The patient, G. M., was a 36-year-old white man, who entered Georgetown University Hospital on February 22, 1938. He had been a foreman on a farm in West Virginia. His health generally had been excellent, and he had not had any serious illness in the past. His present illness began 9 weeks prior to his hospital admission and was characterized by the gradual onset of nausea, vomiting, diarrhea and fever. For several weeks he received medical attention in Harpers Ferry, West Virginia, being treated symptomatically. No definite diagnosis was established. Agglutination tests for typhoid and paratyphoid were negative at that time. A report from his physician in Harpers Ferry indicated that he ran an irregular fever of moderate severity with daily remissions to normal. As his condition became worse he was unable to retain food and lost considerable weight.

On admission to the hospital he appeared seriously ill. He was well developed but was emaciated and cachectic. The temperature was 98.5°F., the pulse rate 100, and the respiratory rate 20 per minute. The blood pressure was 110 systolic and 84 diastolic. The skin and sclerae were slightly icteric. Muscle tone was very poor. The conjunctivae were pale. The tongue was heavily coated and dry. In the right hemithorax the lower half posteriorly was dull to percussion, and the breath sounds were faint. No râles were present. The heart was normal except for tachycardia. Examination of the abdomen was difficult because of voluntary rigidity, but the right lobe of the liver appeared considerably enlarged. The hemoglobin was 58 per cent, the erythrocytes numbered 2,400,000 and the leukocytes 7,600 per cu. mm. of blood, with 68 per cent neutrophilic granulocytes. Urinalysis revealed a moderate albuminuria, cylindruria, bilirubinuria, and a few leukocytes and bacteria. On 2 occasions the blood Wassermann test gave a 1 plus reaction, and the blood Kahn 3 plus. The van den Bergh reaction was immediate and direct, with 4.25 mg. of bilirubin per 100 c.c. of whole blood. The icteric index was 24. Agglutination tests for typhoid, paratyphoid and brucellosis were negative. Several blood cultures were negative. The sedimentation rate was 33 mm. in 60 minutes (Cutler). Repeated stool examinations were negative for amebae.

The clinical course continued as before, the patient running an irregular, moderate fever with remissions of several days at a time. The diarrhea was replaced by constipation with abdominal distension. Numerous blood transfusions were given together with other supportive measures. Antisyphilitic therapy was instituted with bismuth and iodides. Fluoroscopic examination of the chest on February 23 was normal. It was the clinical impression that there was an infectious process in the right upper quadrant of the abdomen which was probably a liver abscess. In order to study the liver more fully, 75 c.c. of Thorotrast was administered intravenously in divided doses over a 3-day period. On March 21 a hepatosplenogram was made, but showed very little Thorotrast in either the liver or spleen. The liver could be seen to be enormously enlarged, and the spleen moderately so. On March 22, 100 c.c. of brown fluid was aspirated from the liver, and examination of the wet preparation suggested the possibility of fragmented amebae. An additional 25 c.c. of Thorotrast was given, and the hepatosplenogram was repeated on March 24, which revealed a decrease in density of the liver tissue in the upper two thirds of that organ, and a circular shadow of increased density surrounding the lower portion. These findings were interpreted to represent a solitary liver abscess. On March 23 paracentesis was again performed, and 1,750 c.c. of purulent fluid was obtained. The first 100 c.c. of fluid removed was dark brown, and contained clumps of necrotic debris. The remainder of the fluid was light yellow and very thick. After removal of the fluid, 5 c.c. of a solution containing a few minims of 20 per cent formalin and 2 grains of emetine hydrochloride was injected into the abscess cavity. The abdomen became softer, and the liver edge ascended about 3 fingerbreadths.

On March 25 a small incision was made parallel to the right costal margin centering at the midclavicular line. The incision was carried down to the peritoneum, and an aspirating needle was introduced into the mass. Thick yellow pus was obtained at a depth of 1 cm. The needle was withdrawn, and an aspirator was introduced into a large cavity from which 3 liters of pus was evacuated. Two rubber tubes were introduced and held in place with silk sutures. The dome of the liver felt and appeared normal. The peritoneal cavity was not invaded. The patient did not improve, however. On March 29 a roentgenogram revealed the presence of a large amount of fluid in the right pleural cavity with compression of the lung. Thoracentesis yielded 1,200 c.c. of purulent fluid, from which Staphylococcus aureus was cultured. On April 2 a tube was inserted into the right pleural cavity, through which more pus was removed. Later in the same day his condition became critical, and the patient expired that evening.

Case 3. The patient, J. K., was a 41-year-old white man, who entered Georgetown University Hospital on October 23, 1941. He had resided in the Philippines from 1925 to 1931, during which time he had malarial fever and another illness of several weeks' duration, characterized by fever and diarrhea. During the 10 years since then he had enjoyed good health up to the onset of his present illness 3 months before admission to the hospital. At that time he developed a dull, aching pain in the right upper quadrant of the abdomen and in the lower half of the right side of the chest. The pain was intermittent, and at times began in the chest just below the nipple and radiated downward below the costal margin. At other times it would begin in the lower sternal region and radiate downwards to the right upper quadrant of the abdomen. A low-grade, afternoon fever was present daily. Anorexia became marked, and he lost 67 pounds in the 3-month period. The bowels were constipated. There was no nausea or vomiting. The pain became progressively worse and more constant and caused him to seek hospitalization.

On admission to the hospital he appeared seriously ill and debilitated. The temperature was 102°F., the pulse rate 90, and the respiratory rate 20 per minute. The blood pressure was 120 systolic and 84 diastolic. The tongue was moderately coated, the breath foul, and several teeth were carious. The heart was normal. The base of the right lung was dull to percussion, and breath sounds were absent. The right hemidiaphragm was considerably elevated, and there was only slight movement on deep inspiration. The abdomen was soft and flat, and no organs or masses were palpable. There was moderate tenderness in the right upper quadrant of the abdomen, especially along the costal border. The hemoglobin was 57 per cent; the erythrocytes numbered 2,930,000 and the leukocytes 13,500 per cu. mm. of blood, with 87 per cent neutrophilic granulocytes. There was moderate albuminuria and cylindruria. Serologic tests for syphilis were negative, and the van den Bergh reaction was normal. Repeated stool examinations were negative. Blood smears were negative for malarial parasites.

The clinical course of the patient was progressively downhill, with increasing anemia, loss of weight and debilitation. The temperature continued irregular, with an afternoon rise to 101° to 102°F., and morning remissions to normal. Constipation was marked. Liver abscess was suspected, and 75 c.c. of Thorotrast was administered intravenously for roentgenographic study of the liver. Hepatosplenograms made on November 12 revealed an area of decreased density, 15 cm. in diameter, occupying the middle of the liver, which, together with the clinical findings, definitely established the diagnosis of solitary liver abscess (fig. 1). The patient was immediately prepared for operation and was transfused with 500 c.c. of whole blood.

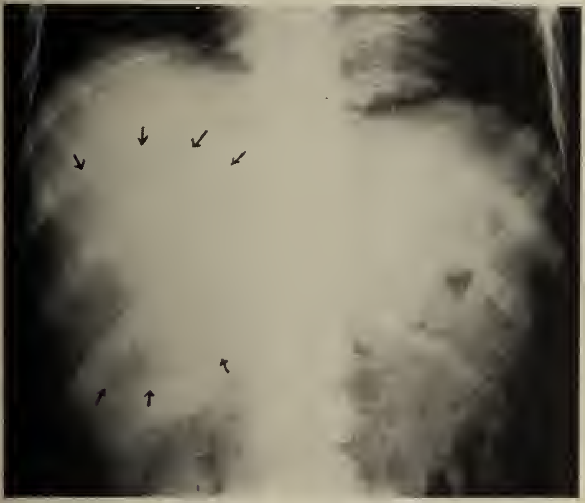

FIG. 1. Case 3. Hepatosplenogram before operation.

On November 13 the first stage of an intraperitoneal hepatotomy was performed. The peritoneal cavity was entered through an oblique incision made in the costal margin in the midaxillary line. The liver was explored, and the under surface of the right lobe felt somewhat fluctuant. Two 5-yard rolls of gauze were packed around the opening between the skin and this area around the liver. The wound was closed with dermal sutures. The immediate postoperative condition was good. A 10-day course of emetine hydrochloride was started, given in daily doses of 1 grain subcutaneously, followed by a 10-day course of chiniofon, given orally in doses of 4 grains 3 times daily. For the next 3 days the patient's condition remained unchanged, but on the 4th day following surgical intervention he developed a diarrhea, and the Entameba histolytica was demonstrated in the stools. On November 18 the wound made by the first stage operation was opened, and the packing was removed. A needle was inserted into the undersurface of the liver and 1,000 c.c. of liver-colored, purulent fluid was removed. This fluid had the typical anchovy sauce appearance of an amebic liver abscess. Following this procedure 4 c.c. of distilled water containing 2 drops of 10 per cent formalin and 2 grains of emetine hydrochloride was injected into the abscess cavity. A soft rubber tissue drain was inserted. The wound was closed with chromic catgut, the skin with continuous dermal sutures. Tension sutures were also inserted.

The patient's immediate postoperative condition was good, and in a few days he began to show progressive clinical improvement. On the 5th postoperative day the temperature became normal and remained so throughout his hospital stay. His appetite improved, the hemoglobin and red cell count rose, the white cell count became normal, and convalescence proceeded uneventfully. Bowel function became normal, and repeated stool examinations were negative for Entameba histolytica.

He was discharged, December 13, 1941, in good condition. Thereafter he was seen at monthly intervals on 3 occasions. He continued to improve, never showing a return of symptoms, and had gained 41 pounds when last seen.

Case 4. The patient, E. S., was a 47-year-old white man who entered Georgetown University Hospital on February 26, 1942. He had been residing in Florida until shortly before admission, and 3 months before he had had an illness characterized by chills, fever, sweating and diarrhea. Because of physical signs in the base of the right lung simulating those of pneumonia, he was hospitalized in Florida and treated with sulfathiazole. Stool examinations were then negative for typhoid and dysentery organisms, but were not examined for amebae. After 10 days the temperature became normal and the diarrhea subsided. His condition was satisfactory until 2 weeks later, when he again developed diarrhea, accompanied by anorexia and fatigue. These symptoms became progressively worse. In 3 months he lost 30 pounds. There was no abdominal pain, nausea or vomiting. Appendectomy had been performed 25 years previously.

On admission to the hospital he appeared moderately ill and debilitated. The temperature was 99°F., the pulse rate 95, and the respiratory rate 20 per minute. The blood pressure was 100 systolic and 58 diastolic. There was no jaundice. On the posterior wall of the left hemithorax, in the region of the 7th rib, there was a large, hard, nonmovable mass about 5 cm. in diameter. Over the right hemithorax there was absence of tactile fremitus from the level of the third rib to the costal margin both anteriorly and posteriorly. This region was dull to percussion, and the breath sounds were absent. The right hemidiaphragm was elevated and moved only very slightly on deep inspiration (fig. 2). The heart was normal. The abdomen was slightly obese and contained the scar of an appendectomy wound. The margin of the right lobe of the liver was palpable 2 cm. below the costal margin, the edge being rather sharply defined and tender. There was slight tympanites. The hemoglobin was 63 per cent; the erythrocytes numbered 3,670,000 and the leukocytes 19,200 per cu. mm. of blood, with 73 per cent neutrophilic granulocytes. Urinalysis was normal. Serologic tests for syphilis were negative. The sedimentation rate was 25.5 mm. in 60 minutes (Cutler). Repeated stool examinations were negative for amebae. Twenty-five c.c. of Thorotrast was given intravenously daily on February 27, 28, 29 for the purpose of roentgenologic study of the liver. Hepatosplenograms made on March 2 showed a slightly enlarged liver with the upper margin not seen in the film. The space above the 11th rib posteriorly showed decreased density and was interpreted to represent a solitary liver abscess (fig. 3). An osteochondroma of the 7th rib on the left side of the costochondral junction was noted.

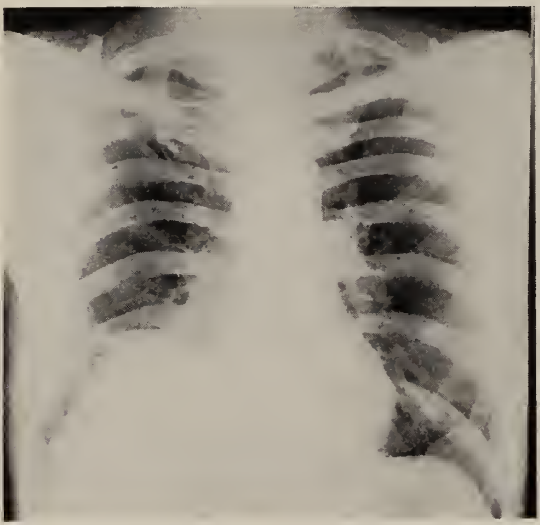

FIG. 2. Case 4. Elevation and "humping" of right hemidiaphragm.

The patient was given a 10-day course of emetine hydrochloride in daily doses of 1 grain subcutaneously, followed by a 10-day course of chiniofon. On March 3 signs of fluid developed in the right pleural cavity. X-ray films of the chest showed an opaque area of the right lung extending as high as the upper margin of the 3d rib on the right side, which was interpreted to represent a rupture of the abscess into the pleural cavity (fig. 4). On the second hospital day the temperature rose to 103.5°F., and the patient appeared much worse. He continued to run a remitting fever for the next 10 days. The diarrhea continued, with 6 or 7 watery stools per day. On March 4 he began to cough up a thick, brick red, foul-smelling fluid having the typical anchovy sauce appearance of an amebic liver abscess. By means of a trochar inserted into the liver abscess through the anterior chest wall, 400 c.c. of thick, purulent, liver-colored fluid was removed. Amebae could not be demonstrated in this material. The patient continued to cough up this same type of fluid, bringing up from 4 to 6 ounces daily. Postural drainage was instituted to assist in draining the fluid from the bronchus. On March 11 the temperature became normal, the appetite improved, and the coughing subsided. Convalescence proceeded uneventfully. A hepatosplenogram repeated on March 21 showed some adhesions of the right costophrenic angle and the liver to be within normal limits, the only residue

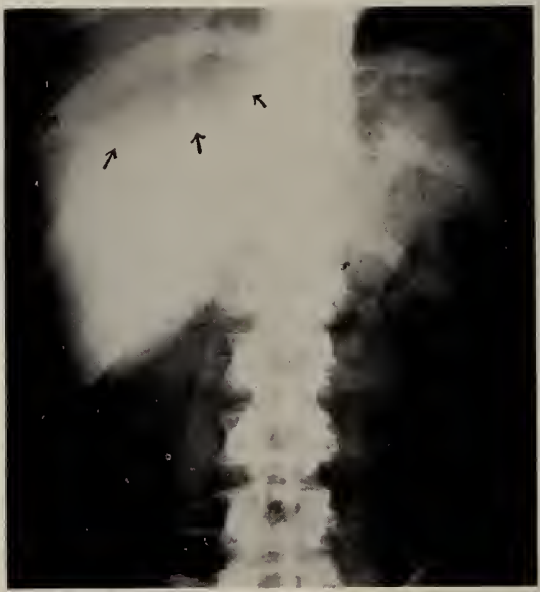

FIG. 3. Case 4. Hepatosplenogram before rupture of abscess.

of the abscess being just below the diaphragm in the middle of the dome of the liver (fig. 5). He was discharged as recovered on March 26, 1942.

COMMENT

In all of these cases the diagnosis of solitary liver abscess was accurately established by Thorotrast hepatosplenography. Precise location of the lesion served as a guide for aspiration. In view of the seriousness of this condition and of the valuable information to be obtained, this method would seem to be warranted in all cases where the diagnosis of liver abscess is suspected. Thorotrast has been used in many hundreds of cases to outline various lesions of the liver, especially those of cirrhosis and neoplasm. Shortly after its introduction Thorotrast hepatosplenography gained wide popularity but recently has fallen into some disfavor because of the possible potential danger from the radioactivity of thorium which remains in the body indefinitely. The voices raised in opposition are largely those of the animal experimenters. Clinical investigation on human subjects so far does not support their premise. In the histologic study of tissues of 65 patients injected with thorium dioxide for hepatosplenography Yater and Whitmore[2] found that "in no case was there any evidence of injury to the tissue nor cellular reaction that could be ascribed to the presence of the thorium dioxide." In a recent comprehensive survey of 286 cases covering 10 years' experience with Thorotrast hepatosplenography Yater and Coe[4] found no evidence of immediate or remote ill effects in their patients. They point out that "the remarkable point concerning this series is the fact that patients who have or have had serious disease of the liver in most instances have lived longer than was anticipated and have continued in moderately good health." Reeves and Stuck[5] and Koster[6] have also pointed out the value of hepatosplenography in the diagnosis of liver abscess.

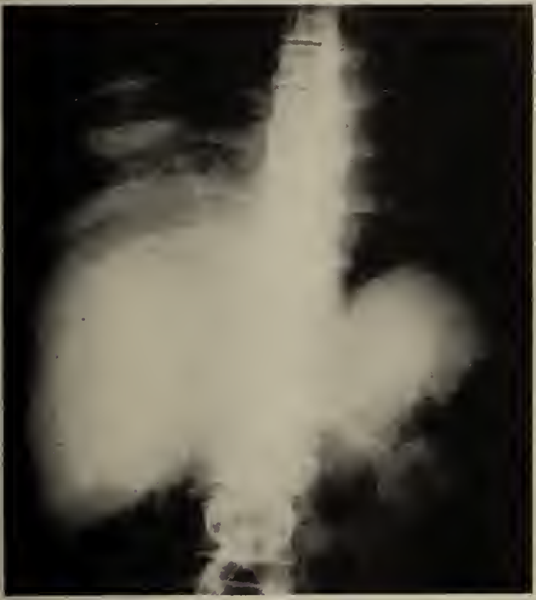

FIG. 4. Case 4. Film made immediately after rupture into right lung.

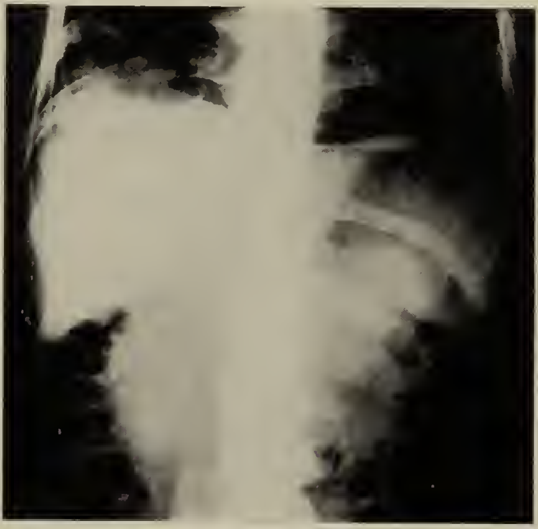

FIG. 5. Case 4. Abscess healed less than 3 weeks after rupture.

CONCLUSIONS

1. Thorotrast hepatosplenography is of definite value in the diagnosis of solitary liver abscess, as demonstrated by its use in 4 cases.
2. Clinical experience so far justifies the further use of Thorotrast in this disease.

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THE USE OF BLOOD PLASMA IN SURGERY

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THE purpose of this paper is to present the application of human blood plasma on a surgical service in a municipal hospital. The plasma used is liquid and unpooled, is prepared by a closed method (Baxter), and is stored at room temperature. The storage period is a variable one. Table 1 presents the duration of storage for various specimens used.

The administration of liquid plasma is extremely simple. No consideration is given to the type of agglutinin present before administration and all of the plasma is filtered by a metal mesh filter during gravity administration. The plasma is given intravenously, subcutaneously, and intramuscularly. There have been recent reports of intrasternal administration with simplicity and effectiveness.[1] The reaction rate for intravenous administration is practically minimal. A recent study of 1,500 transfusions of plasma showed only a 1 per cent reaction rate.[2]

Plasma was used for the following conditions in surgical patients:

1. Acute traumatic shock
2. Surgical shock
3. Acute hemorrhage with and without shock
4. Burns with and without shock
5. Infectious shock
6. Intestinal obstruction with and without shock
7. Preoperative and postoperative hypoproteinemia
8. Hepatorenal syndrome
9. Obstructive jaundice with and without hepatic insufficiency
10. Preoperative support for an anticipated long and traumatizing operation.

The use of plasma in the treatment of traumatic shock is almost dramatic. The shock following trauma not associated with severe hemorrhage is characteristically secondary, with the loss of plasma into the extravascular spaces. Plasma breaks this pathologic cycle by increasing the circulating volume and volume flow. It also supplies protein which maintains colloid osmotic pressure in the capillaries thus preventing a further loss of proteins, and it aids in drawing back into the vascular system part or all of the fluid and protein which have escaped. The effectiveness of plasma is insured by the early and repeated use of adequate amounts. By adequate we mean enough to remove the signs of shock and to maintain the blood pressure and pulse within a normal range. The dosage of plasma depends upon the degree, severity, and duration of the shock; these factors are in turn dependent upon the etiologic agents and their persistence. It is difficult to prescribe a dose of plasma for shock, since each case requires individual consideration. A study of cases treated at the Gallinger Municipal Hospital showed that 1,100 c.c. of undiluted plasma was required for the average case of traumatic shock. It is important to administer large amounts in exceptional cases.

There are many clinicians who believe that 500 c.c. is a large transfusion. This quantity may be totally insufficient in the treatment of traumatic shock. As an example, 1 case in this series required 2,000 c.c. of undiluted plasma for a satisfactory response. It is also to be remembered that there are cases that have been in shock so long that irreversible changes may have occurred in the capillaries and vital centers and no amount of plasma will be of avail. A criterion followed by us for the use of plasma is the presence in whole or part of the following signs and symptoms:[3]

1. A systolic pressure of 80 mm. of mercury or less
2. Accelerated and weak pulse
3. Cool, moist and perspiring skin
4. Pallor or slight cyanosis
5. Rapid and shallow respirations
6. Thirst.

TABLE 1

*Administration of Stored Plasma Prepared by Closed Systems**

(Period December 22, 1939 to July 15, 1941)

DAYS OF STORAGE AT ROOM TEMPERATURE WHEN ADMINSTERED	NUMBER BOTTLES OF PLASMA	DAYS OF STOAGE AT ROOM TEMPERATURE WHEN ADMINSTERED	NUMBER BOTTLES OF PLASMA
1	27	36	1
2	13	37	3
3	28	39	4
4	4	40	1
5	3	44	1
6	6	45	2
7	27	46	4
8	4	48	1
9	11	50	1
10	6	51	2
11	5	55	2
12	2	56	2
13	3	60	3
14	25	65	2
15	2	67	1
16	2	68	1
17	3	69	1
18	4	70	3
20	2	80	1
21	11	90	1
22	1	105	1
23	4	107	1
24	4	122	1
25	1	125	1
26	3	137	1
27	2	150	6
28	1	152	1
30	7	158	1
31	2	165	1
32	1	182	1
33	1	192	1
34	1	210	1
35	1	358	1
		365	1

* One of the following Baxter methods was used for preparation of plasma: (1) centrifuge transfer, (2) alsever sedimentation, (3) centrivac vacuum.

The following plan is used for treating cases of traumatic shock:

1. Use plasma as soon as possible after an evaluation of the condition has been made.
2. Treat the associated conditions such as lacerations, fractures, internal injuries, etc. after the shock is controlled, partially or fully.
3. Keep the patient quiet and warm, using sedatives if necessary.

Shock is the most common emergency in surgical practice. Plasma is the agent of choice in the treatment of uncomplicated surgical shock. In the entire series studied, only a few cases of surgical shock failed to respond to plasma. These cases failed because of the presence of either extensive and persistent trauma or of some underlying pathologic state which caused a loss of plasma. The most striking phase of the treatment of shock with plasma is the prompt response. Almost immediately after starting the transfusion the cold, clammy and perspiring skin will become dry and warm. It is as if a spigot had been turned off. One can usually expect a rise of 10 to 15 mm. of mercury in the systolic blood pressure after the intravenous injection of 100 c.c. of plasma in the average case. The usual amount required for the "run of the mill" case is 300 to 500 c.c. of plasma. It is essential in the proper use of plasma to observe every patient who has surgical shock, or who has been treated for shock, for recurrences. This period of observation should last for at least 24 hours after the initial onset.

The prophylactic use of plasma in early cases of shock has proved very effective and often allows extension of the surgical procedure (longer than was anticipated and with less haste). The postoperative course is usually smoother if plasma has been used to avoid surgical shock. This is given by slow intravenous drip throughout the period of the operation, or a quantity may be given a few hours before the operation. This is especially useful in thorocoplasties, intestinal resection, gastric resection, and spinal fusions.

The therapy of acute hemorrhage is the replacement of part or all of the blood lost by accurately matched sterile, nonluetic, nonmalarial blood. The blood donor system and the blood banks have been developed to meet this requirement.

Patients with ruptured tubal pregnancy, premature separation of the placenta, postpartum hemorrhage, ruptured spleen, etc., require immediate treatment. Even when a blood bank is available it requires from 20 to 30 minutes to prepare blood for a transfusion. Plasma may be given immediately and will frequently overcome the underlying secondary shock developing from the reduced blood volume. The early use of plasma in acute hemorrhage many times will obviate serious complications.

Plasma removes the emergency from emergency blood transfusions. A plasma bank in small hospitals will solve the problem in cases of acute hemorrhage and shock. Plasma does not replace whole blood; it is a substitute for whole blood used in the interim required to obtain satisfactory compatible blood.

Shock associated with burns is prima facie evidence for the use of plasma. The principal pathology is the loss of plasma, chiefly the albumin fraction, with the development of hematogenic shock and acute hypoalbuminemia.[4] The acute exudative phase of burns is a serious one, and it is imperative that patients be treated with large doses of plasma. There are many different methods for calculating the amounts of plasma required. One method is the administration of 500 c.c. of undiluted plasma for each $12\frac{1}{2}$ per cent concentration of red blood cells, and to keep the total protein above the critical level of 5.5 Gm. per 100 c.c. of plasma. The most important index of the amount required is the clinical response of the patient. Careful and continuous observation of burned patients is essential, since cases may go into shock repeatedly during the first 72 hours. Crystalloid solutions should not be used if capillary permeability exists, because this will further decrease the plasma proteins and the capillary osmotic pressure. The size of the burn is not always an index of the severity of the shock. What may seem to be an innocuous first degree burn may result in a severe state of shock.

After the acute exudative stage the burned patient goes into the secondary toxic stage which is closely related to tissue protein metabolism. The hypoproteinemia and resulting edema with the possible water intoxication decreases the reparative powers of the body. Careful consideration should be given to the protein loss and fluid balance. Therefore the treatment of this stage is a high protein, carbohydrate and accessory factor (vitamin) intake and removal of the elements and pathology which cause hypoproteinemia and diffuse tissue toxicity. Plasma will supply the necessary protein. The associated secondary hypochromic microcytic anemia is treated by repeated small whole blood transfusions and the use of ferrous sulfate. In passing, it should be noted that the treatment of burns resolves itself into the treatment of shock, toxemia, hypoproteinemia, and the local wounds.

Personal experiences with infectious shock caused by peritonitis and septicemia have not been very satisfactory. We believe that large and frequent amounts should be used. One patient who recovered received 36,000 c.c. of dilute plasma during a 3-week period.

Intestinal obstruction is associated with a high mortality. Many cases were admitted to Gallinger Municipal Hospital sometime after the onset of symptoms. In many instances as long as 3 and 5 days had elapsed. The mortality in intestinal obstruction is largely due to dehydration, secondary shock, and acute hypoproteinemia. It is often the practice to give patients with intestinal obstruction large amounts of saline solution. This should not be done if capillary permeability exists, since it only increases the hypoproteinemia and shock. Our results with plasma have been exceptionally satisfactory. It is our custom to give plasma by drip infusion in most of our cases of intestinal obstruction, particularly in those in which resection is indicated. The use of plasma to overcome the loss associated with long-standing intestinal obstruction frequently permits more extensive operative procedures.

Preoperative and postoperative hypoproteinemia exists if any of the following factors or any combination of these factors is present: (1) excessive loss, (2) increased destruction, (3) defective formation and utilization, (4) inadequate intake, and (5) retarded formation and utilization. Hypoproteinemia is now being watched for and treated more carefully. With the loss of labile, stored and plasma proteins an abnormal electrolyte state and colloid osmotic pressure exist which cause the development of latent and visible tissue edema. For this reason the use of sodium chloride requires care and understanding. An excess of salt will increase the edema. In our experience measurable hypoproteinemia has not been frequent. However, in the intestinal surgical service we have had the opportunity to see and treat this condition. This has been present particularly in cases of carcinoma of the stomach. These patients have gone through a long period of starvation before the operation, and this starvation continues after the operation for 3 to 7 days.

Patients with hypoproteinemia seem to go into shock readily, more so than normal patients. If hypoproteinemia is corrected, postoperative complications decrease, intestinal motility increases, shock decreases, proteins are utilized more readily and sodium chloride is tolerated in larger amounts.

In our limited work we have found that it is not possible to calculate the response of the blood to a specific amount of plasma. Clinically, we have noticed a marked improvement in hypoproteinemia patients with large doses of plasma.

Hepatic insufficiency and hepatorenal syndromes are rather new to us, and our results are inconstant. The hepatic insufficiency due to obstructive jaundice seems to do better during operations if the patient is treated with plasma proteins. One particular case in our series of "hepatorenal syndromes" associated with peripheral circulatory collapse responded to 1,000 c.c. of plasma and roused gradually from the coma. This liver-kidney failure followed a longstanding obstructive jaundice and an operation for removal of a common duct stone.

Summary

Experiences with the use of plasma in a surgical service is presented. It offers a simple, safe substitute for whole blood. In cases of secondary shock without hemorrhage plasma is the agent of choice. The frequent and early use of plasma in adequate doses will often avoid the presence of serious irreversible changes. The use of plasma in World War II, brief as it is, emphasizes its importance in the treatment of combat wounds.

N.B. The authors are indebted to Dr. J. Ross Veal of the Surgical Staff of Gallinger Municipal Hospital for his many courtesies.

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SICKLE CELL ANEMIA AND CHOLELITHIASIS

Report of a Case

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SICKLE cell anemia was first described by Herrick[1] in 1910. The following year, Washburn[2] reported this disease entity in a negro woman aged 25. According to his report she had been operated upon in March, 1908 for gallstones, and 107 stones were recovered from the gall-bladder. Very little improvement resulted from the operation and it was discovered later that she had sickle cell anemia. Only 2 other cases were then recorded up until 1923, when Sydenstricker and his associates[3] pointed out that this disease was not a rare entity in the negro race. Since the publication of this report a voluminous literature has accumulated considering the various aspects of this blood dyscrasia.

The occurrence of cholelithiasis in this disease has been reported numerous times. Graham,[4] in 1924, reported the necropsy of his case, that of a 30-year-old colored man whose gallbladder was filled with thick dark green bile and contained 3 faceted greenish-black calculi. The ducts were patent. Sydenstricker,[5] in 1924, reported the necropsy findings of 5 cases of sickle cell anemia, 2 with the active type of the disease and 3 with the latent type. No gallstones apparently were present in any of these cases.

Hamilton,[6] in 1926, cited the case of a 33-year-old negro who consulted his physician because of jaundice, and it was suggested, after making X-ray films, that he had gallstones and should be operated upon. This he refused, but 3 years later, during a repetition of his attack, repeated roentgenograms were made and he consented to an operation. He was told that 7 gallstones were removed. Four years later he again came to operation because of abdominal pain. The liver was found to be swollen, enlarged and grayish. There were no stones in the bile passages. It was subsequent to this last operation that the diagnosis of sickle cell anemia was made.

Hein, McCalla and Thorne,[7] in 1927, reported the case of a 20-year-old colored man who about 1 year later came to necropsy and was found to have 3 small stones in his gallbladder. Matthews[8] reported 5 cases of sickle cell anemia coming to necropsy, and 1 patient 22 years old had a few small, soft, black calculi in the gall-bladder. The other 4 cases presented no biliary stones.

Mallory[9] reported the case of a 12-year-old Italian girl with sickle cell anemia whose highest icterus index was 20. She was operated upon subsequent to recovery from lobar pneumonia, and both the spleen and the gallbladder, which contained stones, were removed.

REPORT OF CASE

W. T., a colored man, aged 23, entered Gallinger Municipal Hospital on November 3, 1941, having had 2 previous attacks of jaundice accompanied by fever and weakness. During these 2 episodes he was treated at home by his family physician and each attack subsided in about a month. No diagnosis was made as to the cause of the jaundice. The first attack occurred 1 year ago, while the second occurred in July, 1941. He stated that during the first 6 days of each illness his stools were clay-colored and then gradually assumed their usual brown color.

The third episode, and the one which brought him into this hospital, began 2 weeks before admission with jaundice, fever, weakness, and clay-colored stools. The stools had gradually returned to their usual brown color by the time he entered this hospital. The onset of this illness was also associated with anorexia, mild epigastric distress, and belching. He experienced marked relief from the epigastric distress by belching. At no time did he have sharp intermittent pain, chills or vomiting. His urine, dating from the time of onset, was dark brown.

In the interim between his episodes of jaundice he felt fairly well, but some weakness persisted. Furthermore, he noticed that his eyeballs never completely lost their icteric tinge, although his urine and stools were normal. He was instructed by his family physician to avoid fried foods, greasy foods and butter, although he stated that these foods never produced dyspeptic symptoms.

In June, 1941, he applied for work and was required to have a certificate of health. He went to Providence Hospital for this examination and was told he had sickle cell anemia. He was placed on iron and instructed to return to the outpatient clinic periodically. He returned as instructed for only 2 or 3 visits.

The father was living and well. The mother was living and suffered from arthritis. One brother died at the age of 17. He had marked jaundice at the time of his death. One sister died of unknown cause. One brother 36 years old was living and well. There was no history of familial diseases.

The patient stated that he had never been very well, because of periodic attacks of moderate weakness and underweight. He had measles, mumps and pertussis during childhood and a severe attack of rheumatism at the age of 12, the joints of the lower extremities being the only ones involved. They were extremely painful, but at no time did they become swollen. He was confined to bed for a month and completely recovered in 3 months. He had no subsequent joint pain. He had never had heart or kidney disease to his knowledge. Venereal disease and blood treatments were denied. There was no history of ulcers of the legs.

The appetite was good except during periods of acute jaundice. There was no abdominal pain, except distress as previously described. Dyspnea occurred only on unusual exertion. There was no ankle edema.

There were no mental disturbances. The patient had graduated from high school at 18 years of age. The grades were usually B and C, and he never had to repeat any year.

He was a poorly developed and undernourished colored man, lying quietly in the dorsal decubitus position and obviously in no distress. He appeared to be much younger than his stated age. His head was egg-shaped, with the long axis being in the same direction as the long axis of his body.

The sclerae were markedly jaundiced. The buccal mucosae and tongue were pallid, with an icteric tinge. The tonsils were apparently normal. There was a rather large, soft, non-tender submaxillary lymph node on the left side. Other glands were not felt. The thorax was of the long, flat type, with flaring of the lower part anteriorly. Expansion bilaterally was equal and regular. The lungs were negative. The apex beat was visible in the fifth left intercostal space 8.5 cm. from the midsternal line. It was well localized and forcible. A soft apical systolic blow was not widely transmitted. A rougher systolic murmur was heard over the pulmonic area. The second pulmonic sound was markedly accentuated. The heart rate was 80 per minute. The cardiac rhythm was normal. The blood pressure was 106/70.

The abdomen appeared fuller in the upper half than normal for his body type. There was no tenderness or rigidity. The liver was palpable 5 fingerbreadths below the right costal margin in the midclavicular line. This finding was confirmed by dullness on percussion over the same area. The spleen was not felt, and no masses were palpable. The examination was otherwise negative.

Laboratory examinations gave the following results: The hemoglobin was 7.5 Gm. (52 per cent); the erythrocytes numbered 2,780,000 per cu. mm. of blood; and the white blood cells numbered 18,100, with 79 per cent neutrophiles, 6 per cent band forms, 1 per cent young forms, 2 per cent eosinophiles, 1 per cent monocytes, and 11 per cent lymphocytes. The coagulation time was 5 minutes and the bleeding time was 4½ minutes. The hematocrit reading was 21.5 per cent. The clot retraction time was 1 hour and 20 minutes. The fragility test showed beginning hemolysis at 36 per cent, still incomplete at 20 per cent. Erythrocytes showed 2 per cent nucleated cells, reticulocytes numbered 26.2 per cent, and sickle cells were present in the smear. The blood urea nitrogen was 10 mg. per cent. The blood Kahn test was negative. Urinalysis was normal except for the presence of bile. The prothrombin time was 72 per cent of normal. The blood serum protein was 6.94 Gm., with 5.10 Gm. of albumin and 1.83 Gm. of globulin. The total cholesterol of the blood was 188 mg. per cent; free cholesterol was 28 mg. per cent, and cholesterol esters were 160 mg. per cent. The blood phosphorus was 4.52 mg. per cent, and the blood phosphatase showed 9.88 Bodansky units. The icteric index was 400.

Numerous blood counts were performed during this admission, and all of them varied little from that recorded. Numerous icterus index determinations were done; they showed decreasing figures. On discharge the index was 48.

A roentgenogram of the chest was normal. A flat plate of the abdomen showed the presence of 2 calcified shadows 1 cm. in diameter lying opposite the third lumbar vertebra on the right side. These shadows were thought to represent calcified glands rather than gallstones, but the latter could not be definitely ruled out. A lateral film of the abdomen showed these opaque shadows to be situated 6½ cm. anterior to the lumbar spine. A lateral film of the skull showed a mottled, granular appearance of the bones in the posterior parietal area. The diploic portion of the bone showed considerable enlargement, and there was suggestive evidence of vertical striations of new bone formation. This appearance is typical of sickle cell anemia.

An electrocardiogram was reported as being within normal limits.

The course during the hospital stay was entirely satisfactory. The temperature was irregular during the first 2 weeks, fluctuating between 98.6°F. and 102°F. For the most part it was around 100°F., after which it ranged between 98°F. and 100°F. His pulse rate was in proportion to the fever.

After termination of his work-up, it was decided that he had, in addition to sickle cell anemia, an obstruction in the common bile duct, most likely caused by a gallstone. Operation was contemplated, but the patient left the hospital on December 23, 1941. During his stay in the hospital his jaundice decreased progressively, although he was still icteric on departure. Nothing further was heard from him until July 15, 1942, when he was readmitted because of recurrence of jaundice.

In addition to the symptoms noted during his first admission, the patient had pain in both wrists and occasional sharp pain in the lower right side of the chest anteriorly. There was, however, no swelling of the wrist joints. The pains in the chest and wrists disappeared gradually and were entirely gone 10 days after his admission. These pains had been noticed first 4 days prior to his admission. He stated he got along fairly well after he left the hospital in December, 1941. Although the icteric tinge of the sclera never entirely disappeared, he was able to work as a messenger for several months.

He was in no apparent distress and did not appear acutely ill. The positive findings were icterus of the sclerae grade 3 plus, marked jaundice and pallor of the mucous membranes of the mouth and conjunctivae, late inspiratory crackling râles, dullness and diminished breath sounds over the lower right axilla, and slight cardiac enlargement to the left with soft blowing apical and basal systolic murmurs. The upper abdomen was enlarged, and the spleen could be felt with ease on deep inspiration. The liver was down 3 fingerbreadths below the right costal margin and was slightly tender. There was moderate tenderness of both wrist joints, and pain was present on movement of the joints, but there was no swelling. The other joints were normal.

It was thought that, in addition to sickle cell anemia and obstructive jaundice due to gallstones, he had a small area of pneumonia in the right lower lobe. This last impression, however, was not substantiated by roentgenograms.

His laboratory examinations were almost identical to those made during the first admission. Twenty to 25 per cent of erythrocytes were sickle forms in the fresh specimen, and 90 per cent showed sickling after incubation for 24 hours. The icterus index rose from 120 units to 240 units and then fell to 72 units. The prompt, direct van den Bergh test revealed 21 mg. per cent of bilirubin, and later 17 mg. and 9 mg. per cent. Blood phosphatase determination showed 13.6 Bodansky units. Total blood cholesterol was 272 mg. per cent, with 34 mg. of free cholesterol and 238 mg. of cholesterol esters. A hippuric acid test of liver function was normal.

A roentgenogram of the abdomen again demonstrated several irregularly calcified opaque shadows lying opposite the second lumbar vertebra. The fact that there had been some separation of these shadows since the previous examination indicated that they were probably gallstones.

It was planned, if the jaundice subsided sufficiently, to make intravenous cholecystograms, but this never came about, and it was decided to have the common bile duct and gallbladder explored without this test. Sufficient evidence was gathered from his studies to warrant this procedure.

His temperature up to the time of operation fluctuated between 98.6°F. and 102°F. for the first 3 weeks, being most often nearer the higher level. After this period it returned to normal with a very occasional rise to 100°F. The pulse rate was in proportion to the fever. On admission his weight was 96¼ lbs. It decreased to 90 lbs. during the febrile period and then gradually went up to 99 lbs. at the time of operation. In the beginning the jaundice became deeper, but after about a week it started to decrease until at the time of operation it was only of moderate intensity. The stools were clay-colored for the first week only, then gradually reverted back to their usual brown color. At no time during his hospital stay did he appear to be acutely ill.

He was operated upon by Drs. Robert Coffey and Roy Klepser on August 31, 1942, under Pontocaine spinal anesthesia. Their findings were as follows: The liver was found to be greatly enlarged, extending 4 fingerbreadths below the costal margin. The spleen was enlarged to twice its normal size. There were many glands in the peritoneal cavity, some of them being as large as 4 by 4 cm. None, however, seemed to be compressing the common bile duct. The gallbladder was small, scarred and atrophied, and contained no bile. The common duct was greatly distended, being 4 cm. in diameter below the cystic duct. The fundus of the gallbladder was dissected downward to its juncture with the hepatic duct. The ampulla of the gallbladder ran alongside the common duct almost to the duodenal level. The common duct was explored its entire length. Several scoops of black sand and small gravel were removed from the common duct and 1 black stone about 1 cm. in diameter was firmly caught in the region of the ampulla of Vater. This was dislodged and removed with ease. The common duct could then be irrigated with a catheter, the water passing into the duodenum. Both right and left hepatic ducts were patent. A T-tube was placed in the common duct for drainage.

The patient's immediate postoperative condition was good. His temperature, however, went up to 102°F., but gradually returned to normal in 4 days and remained at this level. After the operation the jaundice began to decrease, the icteric indices being 48 on September 3, 60 on September 5, 48 on September 8, 40 on September 11, and 36 on September 14.

On September 18, 1942, an X-ray examination of the abdomen did not reveal the previously described shadows opposite the second lumbar vertebra. There were present, however, 6 or 7 small radiopaque shadows widely disseminated in the liver and common duct area. Apparently not all of the calcified material noted on the preoperative X-ray films was removed, portions of it having been broken up in small pieces and disseminated throughout the hepatic ducts during the process of irrigation of the bile duct.

COMMENT

This case is of interest not only from the standpoint of sickle cell anemia, but also because of the frequency with which this disease is associated with biliary calculi. It is surprising that not more of these cases having gallstones are complicated by common duct obstruction with its train of clinical and laboratory manifestations. In the references cited at the beginning of this report in which gallstones were found to be present in association with sickle cell anemia, no obstructive phenomena occurred. In the cases referred to, innocuous stones were either removed from the gallbladder at operation or were recovered at postmortem examination.

In the case reported here there were 2 soft stones, 1 impacted in the cystic duct and the other lodged in the region of the ampulla of Vater, causing obstruction to the outflow of bile into the duodenum. The cystic duct stone apparently was not noted at the time of operation but was reported as being present by the pathologist. Apparently these 2 stones were the irregular calcified bodies noted on repeated X-ray examination. Taking into account the history of this case, it is logical to assume that the stone in the common bile duct was in place for at least $1\frac{1}{2}$ years and possibly longer. This being true, the marked dilatation of the common bile duct noted at the time of the operation could be explained by a periodic change in the position of the stone which caused intermittent obstruction. That this was the case is substantiated by the occurrence of clay-colored stools at the onset of his individual episodes indicative of complete obstruction; while with the decrease in the jaundice the stools reverted to their normal brown color, indicating at such times only partial obstruction.

It is curious that at no time during the course of his illness did he present the manifestations of typical attacks of biliary colic. He had what is referred to as a silent stone in the common bile duct. If abdominal crises had occurred in this case, as is so common in sickle cell anemia, they would have been attributed to biliary colic even though such may not have been the case. It is practically impossible to differentiate between the type of pain occurring in these two types of disturbances.

It was noted clinically and confirmed at the time of the operation that the liver and spleen were unusually enlarged. Splenomegaly is unusual in cases of sickle cell anemia in the late phase. The smallest spleens have been reported to occur in the advanced cases. Early in the disease the spleen may be palpably enlarged. It is possible that in this case, due to the longstanding obstructive jaundice, some degree of secondary biliary cirrhosis existed and that as the result of this the spleen became enlarged from chronic congestion. This would also explain the enlargement of the liver, although this organ is usually enlarged in cases of sickle cell anemia. Certainly the splenic enlargement was greater than could be accounted for on the basis of the sickle cell anemia of such long standing.

While the jaundice is still diminishing, it is not expected that it will completely subside. That part caused by the biliary obstruction will be relieved, but as is well known in cases of sickle cell anemia, the sclerae continuously present a greenish yellow discoloration even during the periods of remission. This is due to the excessive hemolysis of red blood cells constantly going on, so that at all times there is an increased blood bilirubin. However, it is expected that the van den Bergh test will lose its direct reaction and revert to the normally present indirect reaction.

In sickle cell anemia there is frequently a hypercholesterolemia and hyperbilirubinemia, and these conditions may be of prime importance in the formation of gallstones. These conditions are also observed in familial hemolytic icterus, another blood dyscrasia in which gallstones are frequent. During the height of jaundice the blood cholesterol of this patient was reported as 272 mg. During his first admission on two occasions it approached the upper limits of normal.

In conclusion, the case reported here fulfills the essential criteria for sickle cell anemia especially as regards the blood findings and the osseous changes. Two main features are lacking in the history, namely, the occurrence of the abdominal crises and chronic leg ulcers so frequently encountered in this disease. In reviewing some of the classical papers written on this disease, no mention was made of the occurrence of common bile duct obstruction such as existed in this case.

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Diseases caused by a fungus may be amenable to sulfonamide treatment. Another large and serious group of diseases, the mycoses (diseases caused by a fungus), may be amenable to sulfonamide treatment, Mark Marshall, M.D., and R. Wallace Teed, M.D., Ann Arbor, Mich., say in *The Journal of the American Medical Association* for October 17, 1942, in a preliminary report on the recovery of a child from Torula histolytica meningoencephalitis. Sulfadiazine was the treatment agent.

"Human infection with the various pathogenic yeasts," they explain, "is not of frequent occurrence. This is particularly true of torulosis, which must be classed as an extremely rare disease. When it is considered that the torulae are found on normal skin, in the human throat and gastrointestinal tract, in milk, on various plants and in the bodies of many insects . . . it is surprising that infection does not occur more often. When it has occurred, however, it has usually been fatal. . . ."

They say that "The absence of torulae in the spinal fluid [of the girl whose case they report] since about February 1 [sulfadiazine treatment was started January 13] along with clinical recovery, leads us to the hope that the child may be completely cured. . . ."

In addition to their own experience the two physicians cite several reports by others of "evidence that mycotic infections as a class may be treated successfully by the sulfonamides. . . . It is therefore evident that another large and serious group of diseases, the mycoses, may be amenable to sulfonamide therapy. One has a distinct feeling that the high mortality of the past will give way to a much better experience in the near future."

President's Page

THANK YOU!

Elsewhere in this issue of the Medical Annals readers are informed of the success of the 14th Annual Scientific Assembly. It exceeded even the most optimistic expectations of the Committee on Arrangements. Naturally I, as President of the Society, was gratified and I wish to take this opportunity to express my appreciation to Dr. Fred R. Sanderson, General Chairman, and to all others who made the Assembly possible. Space does not permit my naming all who rendered assistance. However, to those who are not named, I wish to say that I am greatly appreciative of their services.

The scientific program, which is the heart of any medical meeting, was most excellent. Dr. Hugh H. Hussey, Chairman of the Subcommittee on Program, with the assistance of members of his subcommittee did a splendid job and deserves all the commendation he received.

The Scientific and Public Health Exhibits are a tremendous undertaking. Dr. Russell J. Fields has been Chairman of the Subcommittee on Scientific Exhibit ever since the Assembly was transferred to the Mayflower Hotel in 1938. It is largely due to his ability and experience that exhibits at our Assembly have been among the finest of any state medical organization in the country. This year the Exhibit attained the high standard of previous meetings. A great deal of praise is due Dr. Fields and members of his Subcommittee for their accomplishments in the face of many obstacles due to war conditions.

The artistic Pan American Exhibit was made possible through the efforts of Dr. Tomas Cajigas, Chairman of the Subcommittee on Pan American Exhibit, and members of the Woman's Auxiliary. This exhibit attracted much attention and the Society is deeply indebted to Dr. Cajigas and his co-workers.

The Public Meeting this year was unusually successful. Not only was an able speaker obtained but through the efforts of Dr. Joseph S. Wall, Chairman of the Subcommittee on Public Meeting, who did an outstanding job, the United States Navy Orchestra was secured. As always, Dr. Wall performed his duties most efficiently and with distinction.

One of the most difficult assignments in connection with the Assembly falls to the Subcommittee on Banquet, Luncheon and Entertainment. There are innumerable details to be attended to, of which most members have little knowledge. Dr. B. F. Dean was the Chairman this year, and a most capable one.

Others to whom the Society is indebted for the success of the Assembly are Dr. Philip A. Caulfield, Chairman of the Subcommittee on Attendance and Publicity, Dr. Jesse T. Mann, Chairman of the Subcommittee on Auxiliary Liaison, and Dr. Margaret M. Nicholson, Chairman of the Subcommittee on Women Physicians.

Coöperating organizations making valuable contributions were the Woman's Auxiliary, the Women's Medical Society, the Georgetown University Medical Alumni Association and the George Washington University Medical Society.

To all these individuals and organizations I want to say, "Thank you!"

Editorials

THE DOCTOR ON THE HOME FRONT

Practicing medicine as usual is for most physicians in wartime Washington only a memory. An overpopulated city is making increasing demands on an already heavily burdened medical profession. Physicians are not only called upon to care for the medical needs of the citizens, but with few exceptions are performing duties related to Selective Service, Civilian Defense, or some other war organization. Nevertheless, for the present at least there appears to be no need for rationing medical care. However, it would be inexcusable negligence not to prepare now to meet problems which are inevitable if there should be a long war. Already there are indications of conditions which will confront the profession. For instance, in some sections of the District of Columbia so many physicians have been taken into the services that no doctor is readily accessible to the people of the community. This situation is complicated by the fact that physicians in nearby districts are too busy to take on new patients. Consideration should therefore be given immediately to the distribution of physicians. It is only a matter of time until practitioners will of necessity confine themselves to essential home calls. Because of tire and gas rationing, patients, too, will be restricted in traveling to and from doctors' offices.

Washington is unusual in that approximately 50 per cent of its physicians claim a specialty. As the armed forces require additional physicians, it will become necessary for a considerable proportion of specialists remaining at home to do general practice. It has been estimated that about half of the specialists could, if necessary, do general work. They will shortly be appealed to by the District Procurement and Assignment Committee to coöperate in this regard.

Many of the older physicians who have retired from practice have indicated that they will reopen their offices so as to make it possible for their younger colleagues to enter the military services. Response from this group to date has been most heartening. However, they cannot carry as heavy a burden as young men. At least a minimum quota of young men should therefore be kept on the home front because of their ability to "take it."

It is not going to be easy for physicians who remain at home for the duration. That is already clear to many practitioners. However, not all physicians can enter the military services and those in civil practice will be serving the Nation in a most vital capacity. For the victory of our armed forces will depend in no small degree upon a healthy as well as a courageous people. The job cut out for our doctors on the home front, therefore, is to "keep 'em well."

MEDICAL SERVICE FOR FEMALE GOVERNMENT WORKERS

Following several conferences held by officers and committee members of the Medical Society and representatives of the United States Public Health Service, a plan for providing medical service for female Government workers who are to be housed in dormitories, two of which are now under construction, was agreed upon. Six dormitories are going to be erected, capable of housing an aggregate of twelve thousand female Government workers. Each dormitory group will have its own infirmary. The location, housing capacity, and number of infirmary beds are as follows:

LOCATION	HOUSING CAPACITY	INFIRMARY BEDS
Arlington Farms	5786 (White)	54
Suitland	838 (White)	12
East Potomac Park	2245 (White)	26
Armory Site	838 (White)	12
West Potomac Park	1372 (White)	16
Stadium Site	838 (Colored)	12

It is proposed that medical care shall be furnished white employees by members of the Medical Society of the District of Columbia and the medical societies of Arlington County, Virginia, and Prince Georges County, Maryland, on a fee basis. Colored employees, it is contemplated, shall be cared for by members of the Medico-Chirurgical Society on the same basis.

In the event that an occupant of a dormitory is taken ill, the nurse in charge of the infirmary will call the physician of the employee's choice, or if she does not have a physician, will consult MEDICAL BUREAU, which will provide the names of practitioners from its list. Treatment in the infirmaries will be limited to minor illnesses. Where more extensive treatment is necessary, employees will be removed to institutions selected by them and their physicians. In other words, the relationship will be the same as in private practice.

As occupants of the dormitories will be limited to individuals having an income not to exceed $1,620 per year, it was agreed that it would be desirable to adopt a fee schedule, not only for visits to the infirmary but for consultations and surgical operations as may be required. The Committee on Medical Economics voted that the fee schedule adopted by the Society when MUTUAL HEALTH SERVICE was established should be used, it being understood that the schedule applies only to individuals actually residing in the dormitories. The Executive Board approved the Committee's recommendation and directed that a communication, together with the fee schedule, be mailed to all members of the Society.

In a communication directed to the Medical Society's membership on September 11, the Committee on Medical Economics requested each member to indicate whether or not he approved of this plan. To date 273 have replied, of which 265 approve and 8 disapprove. On this basis, therefore, the plan will be placed in operation as soon as workers are received in the dormitories. It was reported that approval has also been given the plan by the medical societies of Arlington and Prince Georges counties. Although no communication has yet been received from the Medico-Chirurgical Society, it is understood that the plan also meets with its approval.

THE MEDICINE SHOW—1942 MODEL

Those of us who were fortunate enough to have lived in a small town at the beginning of the century will remember the medicine show. Not being too critical at the time, it seemed to us a glamorous affair. The "doctor," so hilariously characterized by W. C. Fields, was a picturesque if not a romantic figure. He wore a silk hat, a flowing tie, and a Prince Albert coat. Glib of tongue, he made sweeping claims for mysterious concoctions in large bottles. The gullible were readily taken in by the "doctor's" assurances that his remedy contained the magic formula which would restore the most sadly impaired health.

The modern version of the medicine show is much the same except for the veneer which clever advertising copy writers have applied. Promoters have found the radio a highly effective medium through which to sell their "cures." For it has given the medicine show an air of respectability. Thousands are taken in when a reassuring voice extols the virtues of some "marvelous" remedy. Surprisingly enough, the intelligent are often as gullible as the ignorant.

Government agencies are endeavoring to eliminate the worst offenders and in many instances have succeeded. Nevertheless, one can tune in daily on otherwise excellent programs and hear claims made for "cures" for everything from headache to liver disturbances. These may not be as extravagant as they were in the old days, although that is open to question. If cures are not claimed, sponsors come as close to it as they dare and the fact is that some of the products, innocuous though they may be in themselves, are a menace to health in that they lull people into a false sense of security.

Of course, standards of some radio stations are higher than others. One suspects it depends upon how much they are in need of revenue. It is rather paradoxical that radio stations which accept so-called medical advertising are insistent upon high standards in other directions. They are extremely cautious, for example, about talks broadcast over their stations, deleting objectionable and unsubstantiated statements. However, they ignore unsupported claims for hair growers and rejuvenators even when it is clear that they have no scientific value. The usual reply to protests is that such advertising is acceptable unless the Federal Trade Commission or some other Government agency charged with the responsibility of investigating fraudulent claims declares them otherwise. There are, of course, instances where the products advertised are on the borderline. It is these that are difficult to eliminate.

Radio stations are not alone in furthering the interests of promoters of quack remedies. Reputable newspapers often accept advertisements which are open to serious question. It is rather ironical for editors to demand the best medical care for the people on their editorial pages when they publish objectionable medical copy in their advertising columns.

It is a recognized fact that medicine has come a long way in its efforts to protect and save life. However, the modern medicine show seriously handicaps its efforts. Radio stations and newspapers should recognize their responsibility and, before accepting medical advertising, make a thorough investigation. If sponsors' claims are in any way extravagant or the product advertised is questionable, their responsibility is clear.

PERTINENT PARAGRAPHS

September Meetings Although routine activities of the Medical Society received attention, most of the effort during September was concentrated on preparations for the 14th ANNUAL SCIENTIFIC ASSEMBLY. The ASSEMBLY has grown to such proportions that during the two or three weeks before the meeting, the Society's office staff must devote nearly full time to details in connection with it.

The following meetings were held in September:

September 4	Executive Board
September 8	Subcommittee on Public Meeting, Annual Scientific Assembly
September 12	Subcommittee on Attendance and Publicity, A. S. A.
September 14	Section on Pathology and Laboratory Medicine
September 15	Committee on Arrangements, A. S. A.
September 16	Committee on Public Relations
September 22	Committee on Industrial Medicine
September 23	Committee on Sports
September 25	Subcommittee on Public Meeting, A. S. A.
September 28	Executive Board

The Blackout and Health

If a permanent blackout for the duration should be found necessary in Washington, what would its effect be upon the health of the people? Of course no one can answer this question or foresee the results of such an exigency. However, experience in Hawaii, where a complete blackout is in effect, is encouraging. The following editorial comment appears in the July issue of the *Hawaii Medical Journal*:

> "The blackout has been irksome. It has made restaurants close when their morning employees end their eight-hour shift—for an extra shift to work only three or four hours is not practical in many instances. It has closed theatres by seven, and thereby has closed them throughout the week to workers whose shift ends at five or six o'clock, and completely to the many workers whose week lasts seven days. It has closed bars completely to all except the night-shift men. Together with the curfew, it has kept many people from enjoying one another's society after the daylight hours. It has prevented evening use of libraries. It has been hard on many businesses, as well as on their potential customers. It has worked some degree of hardship on almost every person in the Territory, and as the warmer summer weather approaches it seems likely that it will become even less pleasant than it has been. *But it doesn't promote ill health*—or at any rate, no increase of illness has occurred since the blackout went into effect, notwithstanding the serious overcrowding of nearly all public facilities that has occurred during this period as a result of the rapid increase of population.
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> "Indeed the incidence of contagious diseases during the first five months of 1942 has been materially lower than during the first five months of 1941, with only these exceptions: typhoid fever (of which an epidemic occurred in March 1942), pneumococcus pneumonia, and pertussis."
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> "Why pneumonia has increased is not definitely known. Possibly the increase is attributable in part to the recent importation of fresh strains of the organism from the Mainland. Possibly overcrowding of defense workers in the limited housing facilities available for them has been a contributing factor.
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> "But in general it is plain that the blackout cannot be blamed for causing an increase in the incidence of communicable diseases since December 7—for actually a considerable decrease of their incidence has taken place.
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> "It will be interesting to observe what the warmer and more humid weather of the summer and fall months brings."

Although housing, climate and many other factors in Washington differ considerably from those existing in Hawaii, there are similarities such as the influx of troops and war workers which lead one to believe that if proper precautions are taken by health authorities, residents of the Nation's Capital will not fare too badly in the event of a permanent blackout.

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Medical Fallacies Persist

Commenting on the vitality of some medical fallacies, Dr. H. E. Robertson of the Mayo Clinic says: "It is not difficult to understand why the conclusions reached by the medical masters, even if inadequately verified, should control medical thought and be transferred by medical writers to their colleagues." Enlarging upon this thesis he writes:

> "The story is told that Sir Walter Scott in a careless statement said that DeFoe's 'Journal of the plague year' belonged to that 'peculiar class of compositions which hover between romance and history.' As a result, this classic description of the great plague is now classified by reputable publishers as 'fiction.' This led Nicholson, in a historical review of the authenticity of DeFoe's journal, to remark, 'When a tradition once becomes established by the hallmark of acknowledged authority, it takes more than cold facts to uproot it from men's minds—it takes time.' Perhaps Watrin had the same idea when he wrote, 'between a true biologic fact and its correct interpretation there often is the lapse of a century.'
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> "It is small wonder, then, that medical fallacies, propounded either in ignorance or carelessness by some 'authority,' should persist, often with an astonishing and almost inexplicable tenacity. Busy physicians sandwich the material side of medical practice with the occasional paper on some phase of medicine. Busy consultants on a hospital staff or professors in a medical school spend their spare hours in writing treatises and even books. They have neither time nor patience to 'run down' and verify every statement that they quote. Unquestioning acceptance of much ancient lore is the path of least resistance and immeasurably simplifies the

labor of original composition. It is argued that the accomplishments of our forebears are our most valuable heritage. However, the necessity of using these fruits of past endeavor is likely automatically to dull our judgment and, quite naturally, all we doctors, like sheep, have gone astray.

". . . Names of tumors offer a fruitful field for illustrating the tenacity with which the medical world, including its bona fide scientists, cling to tradition and custom. In 1857 Virchow reported an adipose connective tissue, mucus-containing tumor which affected various nerve sheaths throughout the entire length of the spinal column. Such tumors had been called 'lipoma colloides' or 'gelatinosum.' Virchow suggested the name 'myxoma lipomatodes.' In the first volume of his 'krankhaften Geschwültse' he devoted a whole chapter to the 'myxomas,' a term which he chose to designate those connective tissue neoplasms which held interstitial mucus. Since that time medical students have been compelled to learn, and worse yet, medical instructors have been compelled to teach, that particular chapter of Virchow's book almost verbatim. They completely ignore the fact that all sorts of connective tissues, even the stroma of carcinomas can contain pathologic amounts of interstitial mucus. The condition is not sui generis and does not deserve a special tumor designation. It probably means some disturbance in the circulation of the interstitial fluid, perhaps a lymph stasis; at any rate, there is no such entity as a 'myxoma' and that particular species of neoplasm should be dropped from the tumor category. The hundred years is nearly up."

"On the clinical side, medical literature records innumerable conclusions and generalizations based on insufficient data, which have been transmitted far and wide sometimes for several generations. They occasionally dominate medical thought and practice, although not quite as thoroughly as galenic doctrines controlled the medical world for several hundreds of years. Examples of such fallacious opinions readily come to mind. John Hunter's pronouncement and apparent demonstration of the unity of syphilitic and gonorrheal infection, Cohnheim's assertion that bacteria can pass through the kidney without injury to it, Robert Koch's denial of the infectivity for human beings of the bovine bacillus of tuberculosis, these and many others, often sincere and honest but ill founded statements, have led portions of this medical world astray, frequently for many years."

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We Must Be on Guard

It is unnecessary to comment on the importance of sanitation in a city as crowded as Washington. Many persons have expressed misgivings, knowing that housing conditions are none too good and recognizing the difficulties of enforcing sanitary regulations under wartime conditions.

Nearly all business establishments are handicapped by lack of personnel. The military services have and will continue to draw heavily upon male help. This situation is serious, particularly in eating places where it has become difficult to observe rules of sanitation as scrupulously as before.

Not all eating establishments coöperate as well as they might. Particularly is this true of lunch counters in drug stores. Numerous complaints about them have been received at the District Health Department.

Protection against such laxity lies in providing the Health Department with funds necessary to employ the required number of qualified sanitary experts. Dr. George C. Ruhland, District Health Officer, is at the present time endeavoring to obtain funds making it possible to increase his staff of inspectors. His request should not only be granted but he should be given authority to employ qualified personnel.

The medical profession generally will support Dr. Ruhland in his request. Washington has long been in the vanguard of cities where sanitation is concerned and every effort should be made to maintain the high standards which have been set. No greater calamity could befall the Nation's Capital than an epidemic and the most effective way to safeguard it against the spread of disease is to see to it that laws relating to sanitation are observed.

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Health and Fitness at Fifty

There is a growing interest in the diseases of middle and old age. Evidence of this is the increasing number of articles on the subject which appear in medical journals.

Dr. Roger I. Lee of Boston makes a common-sense approach to this subject in an address which he gave before the Mayo Foundation on

"Health and Fitness at Fifty." Dr. Lee discusses the physical aspects of life at middle age and then proceeds to the mental side. He says:

"The old saying is that there is the right amount of worry in the world but the wrong people do it. People are supposed to worry about money but the rich worry more than the poor. A person worries because at some particular time he is in a worrying mood and he easily finds something to worry about. Our friends in mental hygiene have been telling us this for years and mostly we have done nothing about it. We sadly need new technics in this whole field. Undoubtedly, some people enjoy worrying as some people like drinking and some of the selected results of alcohol. The nervous, worrying patient of fifty, of forty, of thirty, or of twenty, if you will, may present an unstable blood pressure. The intelligent doctor knows that in a substantial proportion of such cases, this process will eventuate into permanent hypertension. Shall we doctors wait until the patient has permanent hypertension and then submit him to sympathectomy of some kind if he has not unilateral disease of a kidney? Or shall we wait for a renal extract? Perhaps we may tell him not to be nervous and not to worry. Personally, I have never known anyone to be helped by merely telling him not to worry. But can anything be done about it and can anything be done at fifty? The psychiatrists say emphatically, 'Yes.' Even at fifty, when the undifferentiated protoplasm of youth has become rather fixed in a pattern which makes some sort of a go with life and the individual's own environment, I believe often something can be done. We at least do not have to dodge it and pretend it does not exist. We now discuss sex with our patients. We can discuss the patients' anxieties and apprehensions. Likewise, we can discuss their depressions and their exhilarations. We may find some physical relationship, sometimes endocrine, sometimes more obviously chemical. We can, without being psychiatrists, try to balance his mental, nervous and emotional activities, just as we do his diet or his physical activity. At least, we must recognize this large section of the pattern of the patient. Disturbances in that field may not kill him but they make him wretched and unhappy. In all probability, it is the nice adjustment in this field that makes for real effectiveness in life's labor and real happiness. It is the well adjusted human being who is healthy and fit, even if he is afflicted with many physical defects. General George Washington suffered much from his teeth and much from his artificial sets. He seems to have been a good general and a good president. Franklin D. Roosevelt has tremendous physical defects but he has carried a load of responsibility that doubtless would have killed most physically fit men. Louis Pasteur made most of his great discoveries after he had only partially recovered from hemiplegia. Beethoven composed great music long after he was too deaf to hear musical sounds. We all know the story of Nelson and the telescope and his blind eye. We have all read deeds of the one-legged pirate. There are countless instances of individuals with marked physical handicaps who have achieved fame in spite of physical shortcomings, because they were mentally, nervously and emotionally fit for the job. And particularly at fifty (and I personally believe at any age) that form of fitness is superior to mere physical fitness. As I have indicated before, new technics are necessary to appraise this form of fitness, but it is imperative that mere physical fitness should not continue to overshadow the fitness that means efficiency or happiness or both. And the converse is true: the Achilles heel of a man is often situated elsewhere than in his physical structure.

"Much of the psychiatric terminology seems to the uninitiated to be mere jargon. Occasionally, out of the welter of words a term or a phrase stands out clear and understandable. To me such a word is 'attitude' and the phrase 'attitude analysis.' We appreciate that many individuals are inefficient and unhappy or both on account of their attitude towards life, society or individuals. Reëducation of these individuals can, in some instances, accomplish much. An attitude analysis may have great possibilities in altering an attitude that has prevented an adjustment with life and consequently efficiency and happiness. And just as with the definite physical defects, recognition or diagnosis is imperative before prognosis and treatment.

"I have endeavored to set forth a few of the problems that affect health and fitness at fifty that do not come within the narrow confines of a stereotyped examination. It is my contention that the certification that the heart is sound, the blood pressure reasonably within established limits, the urine normal and the weight in ordinary and not astronomical figures is important but that is what life insurance examination does, namely, the hackneyed separation of the diseased and nondiseased. Such an examination is largely negative, although there are very positive benefits in the discovery of manifest disease, some of which can be corrected after such an examination. But the shortcomings lie in the failure to improve health and fitness, to ensure if possible a fuller and happier life. At this time, the man or woman of fifty is often vaguely conscious of a dissatisfaction with his well-being. If he or she is so silly as to yearn for youth and its ardent fires, he, or she, is yearning for a biologic absurdity and is attempting to make the sun stand still, water to flow uphill, or to defy the laws of gravity. But at fifty he has a right to expect that medical science can help him to prolong his usefulness and his happiness if not his life and to make him more fit and more adjusted to his job and life.

"This should be given greater recognition by the medical profession. It should become an integral and important part of preventive medicine and should be adopted into the technic of periodic physical examination. . . . For men and women of fifty are the most valuable and most important group in society."

In view of the Society's sponsorship of the Periodic Health Examination Program, attention is directed to the last two paragraphs of the above extract. It places upon physicians who make examinations the obligation to do a thorough and intelligent job.

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The Census Bureau and Civilian Health

The Census Bureau, Department of Commerce, in coöperation with the registrars of vital statistics of the states will keep a check on the health of the civilian population during the war. Every month the death certificates of persons dying in the previous month will be sampled in order to obtain information to assist health officials in detecting unfavorable health trends. In a release to the press on August 16 the Department stated:

> "In wartime, changes affecting public health, which ordinarily occur slowly, come with rapidity and violence. Workers migrate in large numbers to already crowded defense areas. Soldiers are gathered in huge camps in rural areas, and sanitary facilities are overloaded. Women and older men return to factory work. Working hours are longer. Larger proportions of persons are found in the heavy industries. Housing shortages arise, and trailer camps spring up. Many doctors are withdrawn from civilian practice. Diets change and worries multiply.
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> "The present plan is designed to provide an index of the repercussions of such changes on basic health conditions, though it will not permit the spotting of local epidemics or provide detailed statistics for small areas.
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> "Danger limits will be set for certain diseases in each broad region of the United States. These limits will be based on the Census Bureau's records of deaths for past years. When the Bureau's month-by-month graphs of deaths from a disease pass the danger limit in one region, then some action will be indicated. Generally, the next step will be to make a more complete investigation to discover whether the increase can be accounted for on some grounds other than those of a change in health conditions. If it cannot be accounted for thus, then public health authorities and officials concerned with protection and utilization of the nation's manpower resources will be enabled to act to remedy the situation.
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> "For certain areas considered vital to the war effort, or particularly affected by the altered national economy, special indices based on the sample of death reports turned in each month will be watched for any significant tendencies. Monthly bulletins will present a timely report on the health of the country at war, as it is revealed by these mortality records selected at random.
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> "Death certificates offer an extremely valuable source of public health information because of the completeness with which they are collected, the amount of detail given by the doctor as to the cause of death, and the additional statistical dossier provided on the form regarding the age, sex, race, marital condition, and occupation of the deceased."

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Difficulties Ahead for Medical Plans

Numerous medical service plans have been sponsored by state and county medical societies, but there is still no unanimity of opinion as to their ultimate success. An outspoken editorial on this subject appears in the September issue of *Minnesota Medicine.* The Committee on Medical Economics of the Minnesota State Medical Association warns that "the problem of medical expense and how to meet it is likely to be with us for a long time." The Committee then editorializes as follows:

> "Hospital expense is now satisfactorily handled for a large number of people by the insurance method and Minnesota is especially fortunate in the wide coverage, here, of group hospital insurance, a coverage which is being steadily extended.
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> "Most discussions about the costs of sickness relate, nowadays, to the possibilities of insurance coverage by some comparable method for medical expense.
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> "In their attempts to meet this problem, a number of

states have placed themselves in a difficult, not to say anomalous position. Several medical associations have secured passage of enabling acts granting them special privileges in the organization of medical insurance plans and the physicians appear to have failed to make satisfactory use of those privileges. One of them is now threatened with amendments to the legislative act which gave the physicians exclusive organizing rights for the reason that medical efforts in the field have not been effective.

"Clearly, a very careful study of all aspects of the problem, including the probable support of both doctors and public, is needed before any request for special legislation is made.

"So far, no single instance of a verified and unquestioned success has come to the attention of this committee where doctors have organized their own plans on a state-wide basis. Medical plans appear to have succeeded only where there is a limited group of doctors working as a unit or where there is an unusual situation such as a hospital center which serves a closely knit industrial community and where errors are easily corrected and control is simple. Organization of larger groups involves difficulties and disproportionate expense.

"Physicians should therefore proceed with great caution in this matter. They should make exhaustive studies before arriving at any final conclusion as to whether to leave the field to outside organizations, cooperative or commercial, including the established insurance companies, or whether to step in themselves and take the grief.

"Obviously war and the shortage of physicians complicate the problem. Most people agree that new social experiments should not be undertaken now. At the same time, most people also feel that the question of medical expense must be met eventually and that postwar problems, including the return of physicians from the fighting forces and a probable postwar depression, will bring renewed clamor for insurance against medical costs. Organized medicine must be ready for that situation."

There are many who will challenge some of the views expressed in this editorial. It is true that the experience of medical societies with medical service plans to date has not been too encouraging. On the other hand, difficulties must be expected in experimenting with new procedures involving the delivery of medical care. Furthermore, even if it were desirable, there is no turning back. Experiments will go on until workable methods have been evolved. Too great care, of course, cannot be exercised in the development of medical service plans. When they are satisfied that they have done their best in this regard, the chief concern of the medical societies should be the quality of medical service. There is, of course, the important matter of public support. This will be obtained only by persistent effort. It is always the case where innovations are concerned.

This may seem a rather inconsistent position to take in view of the experience of the Medical Society of the District of Columbia with MUTUAL HEALTH SERVICE. However, the failure of this plan was only an episode. The Society is going forward with other plans which it believes will be much more successful.

Overcautiousness may well prove as disastrous to the medical profession as half-baked experimentation. This is the time for the profession to demonstrate real qualities of leadership.

WOMAN'S AUXILIARY NOTES

The Woman's Auxiliary to the Medical Society of the District of Columbia was very active during the three-day scientific session held at the Mayflower Hotel, September 29, 30 and October 1. Two members presided each day at the booth of the Medical and Surgical Relief Committee of America. The Auxiliary presented an emergency medical field set donated by the Medical and Surgical Relief Committee to Vice Admiral Russell R. Waesche, Commandant of the U. S. Coast Guard. Two members of the Auxiliary acted as receptionists for the Pan American exhibit to explain the significance of the sculptures, silver, laces and textiles of our Latin-American neighbors.

The buffet luncheon held at the Sulgrave Club, September 30, in honor of wives of the Pan American diplomatic corps and visiting doctors' wives was greatly enjoyed by the many who attended. Representing the South American countries were Sra. de Concheso, wife of the Cuban Ambassador, Sra. de Blanco, wife of the Uruguayan Ambassador, Sra. de Guachalla, wife of the Bolivian Ambassador, Sra. de

(*Continued on page 418*)

WARTIME ASSEMBLY A GREAT SUCCESS

It was with many misgivings that the 14th Annual Scientific Assembly was undertaken. The Committee on Arrangements debated the advisability of holding the Assembly, finally coming to the conclusion that it would be a worthwhile contribution to the war effort. As readers of the Medical Annals will remember, this view was concurred in by Rear Admiral Ross T. McIntire, Surgeon General of the Navy, in a letter which was reproduced in the September issue.

The Committee's decision was only the first step toward presenting a medical meeting. The Assembly is a considerable undertaking and the coöperation of many individuals, institutions and organizations is necessary to make it successful. Because of the uncertainty of the times, definite arrangements for speakers, exhibits and hotel accommodations were difficult to make. Assistance was not readily obtained from many sources which had always been generous with their support.

It is therefore a pleasure to report that the clouds which gathered over those planning for the Assembly turned out to have a silver lining. For in every respect the 14th Annual Scientific Assembly was a great success. This feeling was expressed by many physicians in attendance, some of whom declared it was the best meeting the Society has sponsored.

It was expected that the attendance would fall far below last year's. However, the figures disclose that there was no reason for concern. In fact, an analysis shows that a larger number of physicians participated than in any previous year. The total registration was 1,760. Of this number, 1,074 were physicians from Washington and nearby states. Of course there was a far larger group from the armed services than in the past. Uniforms were everywhere in evidence. Navy personnel predominated in contrast to last year when there was greater representation from the Army.

The highest praise has been deservedly bestowed upon this year's scientific program. Keen interest was manifest by physicians who filled the Grand Ballroom of the Mayflower from early morning until the final paper throughout the three days of the Assembly. It was a most heartening experience to those responsible for the program to observe the enthusiasm of the audiences.

Ever since the Assembly was transferred from the Medical Society's building to the Mayflower in 1938, the remarkable growth of the Scientific and Public Health Exhibits has been a source of pride to members of the Society. This year, despite many obstacles, these exhibits were up to the standards previously set.

An unusual feature which attracted much attention was the Pan American Exhibit. This exhibit was most artistic and deservedly received very favorable comment. Splendid coöperation was given the subcommittee in charge by the Pan American Union and representative South American countries.

Attendance at the Public Meeting is always unpredictable. This year the meeting was addressed by the Honorable Adolf A. Berle, Jr., Assistant Secretary of State, on "Considerations of Health as Affecting Foreign Policy." Honor guests were Major General James C. Magee, Surgeon General of the Army, Dr. Thomas Parran, Surgeon General of the United States Public Health Service, Captain E. W. Brown of the Surgeon General's Office, United States Navy, Dr. Walter A. Bloedorn, Dean of the George Washington University School of Medicine, Dr. Pedro de Alba, Assistant Director of the Pan American Union, Mr. Francisco J. Hernandez, Chief of the Travel Division, Pan American Union, Dr. Beatrice B. Berle, Miss Katharine Lenroot, Chief of the Children's Bureau, U. S. Department of Labor, and Dr. Martha Eliot, Assistant Chief of the Children's Bureau. Music was furnished by the United States Navy Orchestra. The Grand Ballroom was well filled for the occasion and the speaker

Scientific and Technical Exhibits at the
14th Annual Scientific Assembly

made an excellent impression. Prior to the meeting the Scientific, Public Health and Pan American Exhibits were viewed by many visitors.

Luncheons were sponsored each day of the ASSEMBLY by the Medical Society, the Georgetown Medical Alumni Association, and the George Washington Medical Society. The Society's luncheon on Tuesday was addressed by Rear Admiral Wilfred R. Patterson, Chief of Staff of the British Admiralty Delegation, who substituted for Admiral Sir Andrew Cunningham. Ordinarily there would have been considerable disappointment because of the absence of the announced speaker. However, Admiral Patterson gave one of the best talks of the entire meeting and his remarks were received with much enthusiasm. Fulton Lewis, Jr., radio commentator and well known to members of the Medical Society, gave a forceful talk at the Georgetown Medical Alumni Association luncheon on Wednesday, and Dr. Elmer Kayser, Dean of University Students and Professor of European History at George Washington University, gave a brief but eloquent talk at the George Washington Medical Society luncheon on Thursday on "The World Outlook."

The Woman's Auxiliary was very active during the ASSEMBLY. Members assisted the Subcommittee on Pan American Exhibit; some were in charge of a booth for the Medical and Surgical Relief Committee, and others rendered invaluable assistance to the Subcommittee on Annual Dinner. The Auxiliary held a luncheon in honor of the wives of visiting physicians and the wives of the Pan American diplomatic corps at the Sulgrave Club on Wednesday. Mrs. A. Magruder MacDonald, the President, presided.

The Women's Medical Society gave a dinner at the Mayflower on Wednesday evening. Dr. Helen Gladys Kain, President of the organization, presided and reported that the event was a great success.

Every foot of space in the Technical Exhibit was taken and much satisfaction was expressed by exhibitors because of the attendance.

The ASSEMBLY concluded with an informal dinner held in the Grand Ballroom on Thursday evening. Many more were present than last year and all seemed to enjoy the entertainment planned. Dr. and Madame Pedro de Alba of the Pan American Union and Mr. Alberto Barreto, in charge of special events in Washington of the Radio Division of the Office of the Coordinator of Inter-American Affairs, were guests of the Society and participated in a short wave broadcast to the South American countries. Following greetings from President MacDonald, brief talks were made by Drs. de Alba, Tomas Cajigas and Hayden Kirby-Smith.

Whether next year's ASSEMBLY will be held depends upon the course of the war. It may be possible that the 14th ANNUAL SCIENTIFIC ASSEMBLY will be the last for the duration.

MEETINGS

Wednesday, November 4

BUSINESS MEETING

Motion picture: "Light Behind the Blackout," sponsored by the Community War Fund.

Speaker to be announced.

Wednesday, November 18

Panel Discussion on

UNDULANT FEVER—BRUCELLOSIS—BANG'S DISEASE

SPEAKERS

1. Brucellosis (Undulant Fever in Man)
   LT. COL. A. PARKER HITCHENS, M.C., U.S.A., Professor of Public Health and Preventive Medicine, University of Pennsylvania
2. Bang's Disease (The Brucellosis of Animals)
   BRIG. GEN. RAYMOND A. KELSER, U.S.A., Director of the Veterinary Division

Discussion from the viewpoint of—

Medicine: WALLACE M. YATER, M.D., F.A.C.P., Professor of Medicine, Georgetown University School of Medicine

Surgery: CHARLES STANLEY WHITE, M.D., F.A.C.S., Professor of Surgery, George Washington University School of Medicine

The State Veterinarian: MARK F. WELSH, V.M.D., State Veterinarian for Maryland

"...WE MUST TEACH SCIENTIFIC TRUTHS"

James A. Gannon, M.D.
Washington

I have been invited to tell the readers of the Medical Annals the facts about the alcohol and tobacco situation in the public schools.

About two years ago I was elected to the Board of Education and have been diligent in my attendance and attention at meetings, in order to familiarize myself with the many details which are a part of this large enterprise.

You may not know that the Board of Education spends about thirteen million dollars of the taxpayers' money each year; that the school buildings are valued at fifty million dollars; that we employ about 3,500 school teachers; that there are about 96,000 school children enrolled each year; that we have a large force of custodians and clerks, and that the activities of the Board of Education are important in most of the homes of Washington.

I relate these facts in order that you may understand the volume of the work and why I discovered only recently what has been taught about alcohol and tobacco for about seven years.

One of our war activities was to inaugurate a new course in physical education. The senior students are to have five sessions each week, three of exercises and two of health instruction.

A month ago, the outline of the course was submitted to the Board for approval. I approved it on the whole, but I found that the section relating to alcohol and tobacco contains statements which are inaccurate and misleading.

I proposed at the next meeting of the Board that a Special Committee on Health Education be appointed to review this data and to make such constructive criticism as might be required. The following members of the Board were appointed to this committee: Dr. James A. Gannon, board member; Dr. J. A. Murphy, representative of the Health Department; and Dr. Carroll R. Reed, Assistant Superintendent of Public Schools.

The Committee examined the material furnished it and presented its conclusions as follows:

Washington, D. C., October 7, 1942

To the Board of Education
of the District of Columbia

Ladies and Gentlemen:

This Committee, which was appointed to review the courses of study which pertain to alcohol and tobacco in Health Instruction for Senior High Schools, has carefully considered all the evidence which has come to them, and has the following report of progress to make:

The Committee is cognizant of the fact that a proper understanding of these subjects, in detail, would be impossible unless the student had a basic knowledge of medicine, therefore we recognize the impossibility of thorough teaching of these subjects to high school students.

We feel, however, that there are certain simple facts which can be learned with benefit to the student, based upon scientific writings.

The Committee is very much in favor of instruction of the students in the moral, physical and sociological results of the excessive use of alcohol and tobacco, and the Committee believes that instruction should show due regard for scientific facts.

A study of the proposed courses on alcohol and tobacco shows the necessity for revision. They must be brought up to date; they must have inaccuracies corrected, and they must omit some statements which are just not so. We feel that the students should have the benefit of the latest scientific conclusions in all of their courses, in order to maintain their respect for education.

The Committee proposes to rewrite the outline of the courses in alcohol and tobacco in conjunction with the Curriculum Committee of the Public Schools, and to submit the new outline to the Board of Education at a future date.

Respectfully submitted,
James A. Gannon, M.D., *Chairman*
Joseph A. Murphy, M.D.
Carroll R. Reed

May I emphasize that my activities in this matter are not a defense of alcohol and tobacco, and that I am in full accord with any program calculated to make high school students refrain from the use of alcohol and tobacco. If this is to be accomplished, we must teach scientific truths. Any other course may have the opposite effect.

The proposed courses on which the Committee reported follows.

OUTLINE OF PROPOSED PUBLIC SCHOOL COURSES ON ALCOHOL, TOBACCO AND OTHER NARCOTICS

Editor's Note: These are the courses which the committee of the Board of Education, of which Dr. Gannon is a member, proposes be rewritten.

Our pupils need scientific instruction in the facts about alcohol, tobacco and narcotic drugs, because many young people of today receive harmful impressions through current conversations and practices, the daily press, billboard advertising, magazines, and the radio. Such education can be offset only by definite instruction in modern facts about alcohol, tobacco and narcotics, plus all the emphasis which health and character training can give.

AIMS

1. To show that alcohol is a narcotic and not a stimulant.
2. To show that alcohol is a habit-forming drug.
3. To show the physical effects of the use of alcohol.
4. To show that alcohol is not a true food.
5. To show the relation between the use of alcohol and the state of one's mind.
6. To show that the use of alcohol destroys the moral code built up by civilized man.
7. To show the economic conditions resulting from the use of alcohol.
8. To show that tobacco may have many harmful effects.
9. To show that tobacco is habit-forming.
10. To develop a critical attitude toward current advertising on the subject of alcohol and tobacco.

THE USE OF ALCOHOL

Unit 1

Under certain conditions alcohol may be a food. It is a drug and a poison.

- I. There are several classes of foods. Four general types are considered here:
  - A. Tissue builders, such as proteins.
  - B. True foods for fuel which can be stored, such as fats and carbohydrates.
  - C. Body-regulating foods, such as water, vitamins and cellulose.
  - D. Fuel foods for immediate use and incapable of being stored.
- II. Alcohol is a fuel food of the fourth type.
  - A. Alcohol burns readily, and therefore gives off heat. Examples:
    - 1. An alcohol lamp
    - 2. Engines for the production of power
  - B. Alcohol has been shown by experiment to produce in the human body a certain amount of heat and other forms of energy (Dr. Atwater).
  - C. Very weak and aged people may be kept from starvation for a short time by the use of alcohol, because it is rapidly and easily absorbed.

    Note: Compare with the use of oxygen in Artificial Respiration.
- III. Alcohol is an artificial food.
  - A. The molecules of alcohol are so simple that they pass through the walls of the digestive tracts without any preliminary digestion.
  - B. The cells of our bodies are not naturally prepared for handling such a food, because:
    - 1. They are incapable of storing alcohol.
    - 2. They can take up a small quantity of alcohol, but they are incapable of caring for an excessive quantity.
    - 3. This excessive quantity flows around as alcohol in the blood, until it is completely oxidized.
    - 4. The fruit juices from which the alcohol was made lose in the fermentation process much of their energy. Therefore, alcohol possesses less food value than the original juices.
  - C. It is capable of coagulating albuminous substances. Example:

    Show the effect of alcohol on egg white in solution.
- IV. Alcohol is a drug.
  - A. It is an anesthetic. An anesthetic is any substance which dissolves lipoid.
    - 1. Lipoid is a fat-like substance containing nitrogen and phosphorous.
    - 2. Lipoid is present in all cells and acts especially as a fatty sheath of all nerve tissues.
    - 3. Lipoid is soluble in alcohol, ether and chloroform. Therefore alcohol is anesthetic.
  - B. It is a narcotic.
    - 1. It may produce dullness or stupor.
    - 2. It may produce a temporary relief from pain.
    - 3. It has a depressing and not a stimulating effect.
- V. Alcohol is a poison.
  - A. It dilutes the blood.
  - B. In dissolving the lipoid in the cells, it destroys the selective property of the cells and allows poisons to accumulate in them.
  - C. It slows up the action of the organs of the body, especially the liver and the kidneys.
  - D. When the protoplasm of the body cells is once impaired by alcohol it begins to be permanently damaged, and the organs which they compose cease to function normally.

Unit 2

Alcohol has a definite relation to inability to resist disease. Because of the effect of alcohol on certain organs, their functions are impaired.

I. Alcohol interferes with digestion because:
  A. It withdraws water from all food stuffs.
  B. It acts chemically on proteins.
  C. It dissolves lipoid.
  D. It interferes with the work of the digestive fluids.
  E. It hardens and irritates the tissues lining the alimentary canal.
  F. Alcohol overstimulates the glands which secrete digestive fluids. When food is introduced into the digestive organs, the glands refuse to respond.

II. Alcohol paralyzes the nerves which control the circulatory system.
  A. It interferes with the heart action.
  B. It interferes with the flow of blood.
  C. It relaxes the artery walls.
  D. It increases pulse action.
  E. It drives the blood to the skin.
  F. It drives the blood away from the vital organs.
  G. Continued use of alcohol causes reddening of the skin and inflammation of the mucous linings.
  H. Excessive use may:
    1. Harden the arteries (arteriosclerosis).
    2. Affect the heart muscles (fatty degeneration).

III. Alcohol has several important effects upon respiration.
  A. By interfering with the blood flow, it causes inflammation of the lungs.
  B. It increases connective tissue in the lungs and therefore reduces lung capacity.
  C. It reduces the oxygen needed for the oxidation of foods.
  D. Increased rate of breathing is produced by the effort to obtain more oxygen.

IV. Alcohol interferes with excretion.
  A. The inflammation of skin by the use of alcohol may produce blotches and pimples because the skin cannot eliminate wastes.
  B. Alcohol overworks the kidneys by increasing uric acid and other wastes.
  C. The capillaries of the kidneys which are hardened by alcohol cause the kidneys to become clogged and unable to throw off wastes after a time.

V. By impairing the functions of these various organs of the body, alcohol reduces one's resistance to disease. A user of alcohol is more liable to contract infections and diseases and he is more liable to have a severe case of the disease than an abstainer.
  A. It kills the white corpuscles which are the destroyers of disease bacteria.
  B. It interferes with the ability of the blood to provide antitoxins.
  C. It reduces the resistance to lung diseases such as pneumonia and tuberculosis.
  D. The death rate of temperate daily users of alcoholic drinks is higher than that of total abstainers.
  E. The death rate of free users of alcohol, but not to the extent of intoxication, is much higher than that for total abstainers.

VI. The effects of alcohol upon the nervous system are the most serious. It interferes with:
  A. Moral and intellectual control
  B. Speech and other senses
  C. Walking and large muscles

VII. Alcohol as a medicine.
  A. Before medicine had developed as the science which it is today alcohol was used:
    1. In the treatment of pneumonia
    2. In the treatment of snake or spider bites
    3. In the treatment of many other ailments of man, somewhat like a cure-all, before an effective treatment was known.
  B. Some situations where it is now used internally:
    1. As an antidote when carbolic acid is swallowed.
    2. In certain forms of painful heart disease where a sedative or a narcotic is needed.
    3. As a solvent and preservative for certain helpful medicines.
    4. As the basic ingredient of many patent medicines. Many such concoctions are just as habit-forming as alcoholic drinks and should be avoided.

A good health rule: Take medicine only on advice from a reputable doctor. Do not diagnose and treat your own illness.

UNIT 3

Alcohol breaks down the moral code which civilized man has built up in order to make the world a better place in which to live.

Alcohol is a drug which interferes with the regular work of the nervous system.

I. Alcohol possibly injures the germ plasm, and therefore may be harmful to the succeeding generations.
  A. It dulls the senses.
    1. One under the influence of alcohol is less conscious of:
      a. His surroundings
      b. His speech
      c. His actions
    2. He is less concerned about his personal appearance.
    3. His baser self tends to gain control over his actions.
    4. He may commit acts, the consequences of which may affect his entire future.
      a. Killing and crippling people because he has driven an automobile while intoxicated.
      b. Murder, etc.
  B. It interferes with the establishment of good habits or the breaking of old habits.
    1. Habits are flexible.
      a. New situations influence our habits.
      b. Every act is accompanied by new situations.

- c. It is within man's power to form either good or bad habits.

II. Alcohol is harmful to the social and economic status of the present generation and is a cause of many accidents.
- A. It lowers the social standing of a family.
  - 1. Drinking parents may neglect children.
  - 2. Drinking fathers may not provide adequate food, homes, and education for children.
  - 3. Drinking frequently leads to divorce and wrecking of homes.
- B. It lowers the economic status of a family.
  - 1. Employment may not be secured by drinkers.
  - 2. Drinking often causes the loss of position.
  - 3. Drinking often leads to gambling and loss of salary.
- C. It causes many deaths.
  - 1. No one who is drinking should operate a moving vehicle.
  - 2. People fall and hurt themselves or are struck by cars and injured much more frequently if they are drinking.

THE USE OF TOBACCO

Unit 1

The use of tobacco is detrimental to the human body.

I. The ingredients of tobacco are:
- A. A narcotic called nicotine
- B. Other injurious chemicals
- C. Aromatic compounds

II. Nicotine is used as an insecticide.
- A. It kills sucking insects.
- B. Tobacco dust is used as a repellant to insect invasion.

III. The following effects are produced upon the human body by the various chemicals in tobacco and in its smoke:
- A. Nicotine soothes or dulls the nerves.
- B. Certain of the chemicals yellow teeth and fingers.
- C. Many people are nauseated.

IV. There are many detrimental effects from smoking. Certain people seem to be more sensitive than others.
- A. It fouls the mouth.
- B. It acidifies the stomach and may lead to duodenal ulcer. Smoking on an empty stomach is especially bad for many.
- C. It dulls appetite.
- D. It interferes with vision when the optic nerve has been affected.
- E. It irritates the mouth, throat, and the respiratory tract.
- F. The nicotine absorbed into the circulatory system:
  - 1. Raises blood pressure
  - 2. Accelerates the heart beat
  - 3. Accelerates breathing movements
  - 4. Hardens arteries
- G. It injures physical efficiency.
  - 1. Highest muscular efficiency, endurance and skill are not reached after smoking.
  - 2. Athletic coaches discourage smoking constantly.
- H. Carbon monoxide in smoke unites with red blood cells, forming stable compounds, thus using up hemoglobin, which normally carries oxygen to the body tissues.
- I. Fast smoking of tobacco is more harmful than just taking puffs after long pauses.
- J. The short ends of cigarettes and cigars are most harmful because the nicotine and other chemicals accumulate near the mouth.
- K. Inhaling causes greater absorption of nicotine.
- L. It is generally recognized that the effects of smoking are more harmful to young people who are still growing than to adults.

Note: It is suggested that this material should be covered and a quiz given in from seven to nine lessons.

There are certain other narcotics, such as opium, cocaine and heroin which may very profitably be assigned for student reports.

A SUGGESTED LIST OF PROJECTS DEALING WITH NARCOTICS

1. For one month keep in a notebook newspaper clippings of accidents and crimes committed by people who were drinking or drunk.

2. Make a list of the comments of such people as Lincoln, Gladstone, Clemenceau, Frances E. Willard, Charles Mayo, Fielding H. Yost, Connie Mack and Cardinal Gibbons on the harmful effects of liquor.

3. Study liquor, cigarette, and patent medicine advertisements. Are their statements and claims scientifically correct? Bring into class any material which you find to be unscientific.

4. Prepare a report showing the effects of whiskey on the American Indian.

5. Compare the quantities and qualities of foods, which you can purchase with a dollar, with the alcoholic drinks and cigarettes which may be purchased with this same amount of money.

6. Compare the contributions of each of the above purchases to the human body.

A QUIZ ON THE EFFECTS OF ALCOHOL AND TOBACCO

1. What is a drug? Why is alcohol a drug? A narcotic?

2. Do athletes use alcohol and tobacco while in training? Explain.

3. How is the use of alcohol related to family life? To business?

4. Why is alcohol not a true food?

5. Do you believe anyone is really benefited by the use of either alcohol or tobacco? Discuss.

(*Continued on page 418*)

War Section

SUPPLEMENTAL STAFFS FOR EMERGENCY BASE HOSPITALS

Selected hospitals and medical schools in the coastal States have been invited by the Surgeon General of the U. S. Public Health Service to organize affiliated staff units which will be ready to serve when needed to supplement the medical staffs of Emergency Base Hospitals, now being designated by the Medical Division of the Office of Civilian Defense. These units resemble the affiliated hospital units of the Army except that they are smaller in size. They are being organized in order to assure suitable status and remuneration for physicians who may be called upon in the event of an enemy attack in their locality to care for casualties and other patients who have been evacuated to the interior of their region.

The designation of Emergency Base Hospitals and the formation of affiliated units are part of a joint hospital program of the Medical Division of the Office of Civilian Defense and the U. S. Public Health Service. The program is authorized under an agreement concluded March 2, 1942, between the Federal Security Administrator and the Director of the Office of Civilian Defense.

Physicians in the affiliated units will be commissioned in the inactive Reserve Corps of the Public Health Service. Unless an urgent need for their services should arise, they will remain on an inactive status for the duration of the war. They will be called to active service only if hospitals in their regions must be evacuated and the civilian populations must be moved because of military necessity. Activation of the units will take place by order of the Surgeon General at the request of the Chief Medical Officer of the Office of Civilian Defense on advice of the Regional Medical Officer and the State Chief of Emergency Medical Service in charge of the affected areas.

In order to avoid serious depletion of the professional staffs in the medical schools and hospitals of the target areas, the Surgeon General has recommended that medical schools draw their affiliated units in part from associated hospitals and that nonteaching hospitals invite physicians from other qualified hospital staffs to collaborate.

PHYSICIANS TRAINED AS INSTRUCTORS IN CARE OF CHEMICAL WARFARE CASUALTIES

Fifty physicians from medical schools in the Third Civilian Defense Region attended a course in chemical warfare given at the Chemical Warfare School, Edgewood Arsenal, Maryland, by the Chemical Warfare Service, U. S. Army, and the Medical Division, Office of Civilian Defense. Captain Aubrey L. Sparks, U. S. Army Medical Corps, attached to the Chemical Warfare School, was the director of the course.

The purpose of the Edgewood course was to train physicians as instructors and thus prepare them to conduct courses in their own medical schools for local physicians. In some areas in which there are no medical schools conveniently near, courses are being conducted under the auspices of health departments and medical societies.

Chemical Warfare Service officers lectured and gave demonstrations on the technical aspects of chemical warfare agents, protective methods and decontamination procedures. Physicians who discussed the medical aspects included Drs. Henry Bunting, New Haven, Conn., on pulmonary irritants; Roy O. Scholz, Baltimore, diagnosis and treatment of injuries of the eye from chemical agents; Earle B. Mahoney, Rochester, N. Y., treatment of burns; Louis Goodman, Jr., New

Haven, pathological physiology, diagnosis and treatment for the systemic poisons; David D. Rutstein, Medical Gas Officer, Medical Division, Office of Civilian Defense, Washington, D. C., pulmonary infections; Leonard A. Scheele, Chief, Field Casualty Section, Medical Division, OCD, chain of evacuation for gas casualties; Lt. Comdr. Arthur F. Abt, U. S. Navy, pathology, diagnosis and treatment of injuries from vesicants; Captain Sparks, diagnosis and treatment of casualties from lacrimators and irritant smokes. Captain Sparks also conducted a clinic at the station hospital on diagnosis and treatment of casualties from chemical agents.

CONSERVATION OF MEDICAL AND SURGICAL SUPPLIES

The medical profession and the hospitals of the Nation will shortly be obliged to depend upon dealers' stocks of medical and hospital supplies if they are to maintain their present level of efficiency. The continued shortage of raw materials makes it increasingly evident that even the armed forces may have difficulty in securing their requirements. Stocks on the shelves of the dealers of this Nation constitute the only reserve of medical and hospital equipment which may be available in the near future to meet civilian needs. The hoarding and dead storage of equipment and supplies for a possible emergency should, therefore, be discouraged. Any unexpected emergency could be met by our present civilian medical and hospital resources; continued disaster could only be met by the utilization of military stores which would be made available if there were urgent need.

MORE ABOUT GASOLINE RATIONING

Upon instruction of the Medical Society's Committee on Military Affairs, the Secretary recently addressed a letter to Leonard P. Steuart, Chairman of War Price and Rationing Board No. 5, calling his attention to the voluntary services rendered by physicians and dentists in the District of Columbia to the Selective Service System and requesting that sufficient gasoline be allowed them to travel to hospitals and to Fort Myer, Virginia, where examinations of selectees are made. In reply, Mr. Steuart stated that so far as his office knew, medical men in the District have received sufficient gasoline for their professional needs. He further stated that if the Secretary knew of any instances where this was not the case, he should submit the names and addresses of these physicians in order that a check might be made with local boards as to the action taken on their requests.

APPEAL FOR MEDICAL JOURNALS

The South African Government Supply Mission, 907 15th Street, N. W., has asked the Medical Society to assist them in securing medical literature for physicians on active service in the African Continent. Journals particularly desirable are those containing articles on the following subjects: newer aspects of war surgery; tropical diseases; health of communities in any part of the world where the United Nations forces may have to be quartered; general hygiene and other health matters concerning the care of the personnel of the modern Army, Navy and Air Force.

Journals may be delivered to the Society's office, 1718 M Street, N.W., where they will be called for and transported to the Director General of War Supplies in South Africa.

NEWS AND PERSONALS

The American Medical Association announces that it is cancelling its 94th annual session in 1943, which was to have taken place in San Francisco, because of the wartime demands on the medical profession. Reasons cited were reluctance to draw physicians away from their practice in wartime and a desire to avoid further burdens on transportation facilities. Instead of the usual convention, the House of Delegates, Board of Trustees, scientific councils and officials of the Association will meet in Chicago in June 1943 to consider wartime problems.

The American Academy of Physical Medicine will hold its 20th annual session at Hotel Statler, Boston, October 14–17, 1942. The program will be composed of clinical and scientific presentations involving technics of importance in wartime medicine. Physicians may attend without registration fee. A copy of the official program may be obtained from the Secretary-Treasurer, Dr. Herman A. Osgood, 144 Commonwealth Avenue, Boston.

The Southern Medical Association will hold its annual meeting in Richmond, November 10–12, 1942. Hotel reservations should be made through the Hotel Committee, Southern Medical Association, 109 North Fifth Street, Richmond. Further information regarding this meeting will be found on page vii.

The second session of **A Course for Physicians on the Medical Aspect of Chemical Warfare** will be presented in the Medical Society's auditorium, 1718 M Street, N.W., on Wednesday, November 11, at 8:30 p.m. The subject under discussion will be "A Consideration of the Pulmonary Lesions Induced by Chemical Warfare Agents." Lecturers will be Dr. Chester E. Leese, Associate Professor of Physiology, George Washington University School of Medicine, who will discuss "Pathology and Pathologic Physiology," and Dr. Irving W. Winik, Clinical Instructor in Medicine, George Washington University School of Medicine. Dr. Winik will speak on "Symptomatology, Differential Diagnosis and Treatment." There will be a discussion period.

The District Procurement and Assignment Committee has been informed that there are excellent opportunities for physicians who have, for one reason or another, been disqualified for military service. Communications have been received from individuals and institutions who wish to employ or know of excellent locations for practitioners. Those who are interested are advised to communicate with the Committee at 1718 M Street, N.W., District 3111.

The American Gastroenterological Association will publish the first issue of a new monthly journal, *Gastroenterology*, January 1, 1943. The journal, which will be the official organ of the Association, will be published under the Editorship of Dr. W. C. Alvarez (after June 1943), with Dr. A. C. Ivy as Assistant Editor. The Editorial Board invites for publication clinical and investigative contributions which are of interest to the general practitioner as well as the specialist, and which deal with the diseases of digestion and nutrition. Manuscripts should be sent to Dr. A. C. Ivy, 303 East Chicago Avenue, Chicago. Subscriptions and business matters will be handled by Mr. R. S. Gill of the publishers, Williams & Wilkins Company, Baltimore, Md. The subscription price is $6.00 per year.

George Washington University has added twenty new members to the faculty of the School of Medicine, most of them replacing instructors who have joined the armed forces. They are as follows:

Drs. J. Gordon Bell and Catherine Birch, Instructors in Otorhinolaryngology; Dr. Ruth B. Benedict, Instructor in Medicine; Dr. Sterling Bockoven, Instructor in Ophthalmology; Dr. James T. Burns, Instructor in Medicine; Dr. Frank D. Costenbader, Instructor in Ophthalmology; Dr. Herbert H. Diamond, Instructor in Pediatrics; Dr. Julius R. Epstein, Instructor in Obstetrics and Gynecology; Dr. Dorothy S. Jaeger, Instructor in Pediatrics; Dr. Daniel Jaffe, Instructor in Neurology; Dr. Russel Jon Jansen, Associate in Obstetrics and Gynecology; Dr. Max E. Johnson, Instructor in Neurology; Dr. Morton S. Kaufman, Instructor in Obstetrics; Dr. Irvin Karlin, Instructor in Medicine; Dr. Alan F. Kreglow, Instructor in Medicine; Dr. F. X. McGovern, Associate Clinical Professor of Surgery; Dr. C. Robert Naples, Clinical Instructor in Ophthalmology; Dr. Adolph Rostenberg, Instructor in Dermatology; Dr. Jacob J. Weinstein, Instructor in Surgery, and Dr. Richard W. Wilkinson, Instructor in Ophthalmology.

Georgetown University School of Medicine has added the following nineteen staff members to its faculty for the coming year:

Dr. Isidore Lattman, Associate Professor of Radiology; Dr. R. Pucher, Assistant Professor in Pathology; Dr. Alfred Baur, Instructor in Clinical Psychiatry; Dr. William J. Evans, Instructor in Clinical Obstetrics; Dr. Clara Hoye, Instructor in Clinical Psychiatry; Dr. Sol Katz, Instructor in Clinical Medicine; Dr. Lawrence B. McCaleb, Instructor in Dermatology; Dr. Howard E. Newman, Instructor in Clinical Surgery; Dr. Charles Morgan, Instructor in Pharmacology; Dr. David Nolan, Instructor in Clinical Obstetrics; Dr. Bernardo E. Nunez, Fellow in Medicine; Dr. Weldon A. Price, Instructor in Clinical Pediatrics; Dr. William N. Ransone, Instructor in Pathology; Dr. S. Riera-Lopea, Fellow in Medicine; Dr. Raymond Schwartz, Instructor in Clinical Medicine; Dr. George T. Sharp, Instructor in Clinical Obstetrics; Dr. Ruth E. Standard, Fellow in Medicine; Dr. Bachman S. Smith, Fellow in Pediatrics; Dr. Morris Wulfson, Instructor in Pediatrics.

President Roosevelt dedicated the new **Naval Medical Center** in Bethesda, Md., August 31. The occasion marked the 100th anniversary of the establishment of the U. S. Navy's Bureau of Medicine and Surgery.

Dr. Roy D. Halloran, Superintendent of the Metropolitan State Hospital, Waltham, Mass., since 1933, has been appointed Chief of the Division of Neuropsychiatry of the United States Army, with the rank of Colonel. Colonel Halloran will coordinate the neuropsychiatric service in the Army both in this country and overseas. He has been assigned to the Surgeon General's office, where he assumed his new duties on August 17. While Superintendent of the Metropolitan State Hospital he developed postgraduate courses in psychiatry and neurology, including a review course in military neuropsychiatry. He is a graduate of the College of Physicians and Surgeons of Columbia University.

The George Washington University Medical Society announces its first lecture of a series of six to be presented at the Medical School, October 17. Dr. John Tilden Howard of Baltimore will be the guest speaker. His subject will be "Colitis," with emphasis on the diagnostic approach and therapeutic problems.

St. Elizabeths Hospital held commencement exercises for 12 student nurses, October 5. Federal Security Administrator Paul V. McNutt addressed the class and Dr. Winfred Overholser, Superintendent of the Hospital, presented the diplomas.

Sibley Hospital was presented with a portable aluminum respirator by the Teamsters' Joint Council No. 55. The new device, which covers the chest only, is useful in diseases and conditions affecting the respiratory tract. The presentation was made August 31 by Robert Lester, President of the Teamsters' Joint Council and was accepted for Sibley Hospital by Dr. John M. Orem, Superintendent.

Drs. William Thornwall Davis and Ernest Sheppard attended the meeting of the American Academy of Ophthalmology and Otolaryngology in Chicago, October 7–14. Dr. Davis gave an instructional course on "Ocular Headaches" and presented a lecture on "The Differential Diagnosis of Paresis of the Obliques and the Superior and Inferior Recti." He also gave a radio address over a national hookup from the meeting on the subject, "The Eye Specialist in the War."

Dr. Sheppard gave an instructional course on "Selection of Cases for Orthoptics" as well as a lecture on "The Hyperphorias and Hypertropias; Their Diagnosis and Treatment."

Colonel Leonard G. Rowntree, Chief of the Medical Division of Selective Service, addressed the general assembly of the Medical Society of the State of Pennsylvania at its 92nd annual session in Pittsburgh, October 5–8. His subject was "Wartime Medicine and Selective Service." **Colonel George R. Callender,** M.C., Assistant Commandant, Army Medical Center, read a paper on "Wound Ballistics" before the Section on Pathology and Radiology.

Dr. Maurice Protas, head of the George Washington University Hospital Emergency Medical Unit, operating under the Office of Civilian Defense, addressed 44 young women of the District and nearby Maryland and Virginia upon the completion of their training as Red Cross volunteer nurses' aides, September 3, in the garden of the District Red Cross Chapter House, 1730 E Street, N.W.

Dr. Miriam F. Dunn is conducting a course on "Psychiatry and Mental Hygiene" during the fall semester at the School of Social Work of Catholic University.

B. Brent Sandidge, Superintendent of Emergency Hospital for 22 years, died September 28 while performing his duties as Deputy Air Raid Warden for Washington Hospitals. He resided at 1216 North Wayne Street, Arlington.

Mr. Sandidge was born in Amherst, Virginia, in 1882. He severed his affiliation with the University of Maryland Hospital in Baltimore to become Superintendent of Emergency Hospital in 1920. He was a member of the Medical Advisory Board of the Emergency Medical Service of Civilian Defense and President of the Hospital Superintendents' Association of Washington. Surviving are his wife, Mrs. Blanche Sandidge, a son, William, and two daughters, Mrs. Jean Himes and Mrs. Nellie Miller, all of Arlington.

John Wyeth and Brother, Inc., will provide projection equipment, screen, film, and operator for medical groups without charge for the showing of a new color and sound film entitled, "Peptic Ulcer." The film was produced under the direction of the Department of Gastroenterology of the Lahey Clinic of Boston, and has been approved by the American College of Surgeons. The running time is 45 minutes. Requests should be addressed to the Professional Service Department of John Wyeth and Brother, Inc., Philadelphia.

BOOK REVIEW

Nephritis. LEOPOLD LICHTWITZ, M.D., Chief of the Medical Division of the Montefiore Hospital; Clinical Professor of Medicine, Columbia University, New York. Pp. 328, with 120 illustrations and tables. Price, cloth, $5.50. New York: Grune & Stratton, 1942.

The many complicated problems of nephritis remain unsolved even after reading Lichtwitz' monograph on this subject. The first nine chapters are devoted to the functional pathology of the kidney. In this section the reader is often carried through a maze of unimportant facts. However, the sections on orthostatic albuminuria and nephritic edema are particularly good. In the treatment of uremia one is somewhat amazed at the recommendation of diathermy, short wave and hot poultices to the kidney areas. The use of sucrose is suggested in the section on diuretics, but no mention is made of the potential dangers of this drug in the presence of kidney disease. Dr. Lichtwitz outlines a "simple method" by which the renal excretory capacity can be determined. However, it should be stated that this investigation takes nine days to perform. In a book so recent, it is rather surprising that no mention is made of the newer tests of renal function, such as inulin and Diodrast clearance, as well as the measurement of maximal tubular activity. In the chapter on "The Regulation of Blood Pressure," the renal factor in the production of hypertension is briefly but not clearly outlined.

Following the basic chapters, the various clinical entities of nephritis are discussed. In a rather cumbersome style, the author has attempted to clarify the physiologic and pathologic basis of the several types of nephritis. He stresses the allergic nature of this group of diseases as being due to a sensitization of the renal vascular system. This theory, though not new, is reemphasized and substantiated by animal experimentation. The chapter on "Nephrosis" offers a practical classification and discussion of this group of diseases. The final chapter on "Renal Disease in Pregnancy" is thoroughly inadequate.

S. K.

STEUART BROWN MUNCASTER, M.D.

(1857–1942)

Dr. Steuart B. Muncaster, Life Member of the Medical Society of the District of Columbia, died September 13 at the Episcopal Eye, Ear and Throat Hospital, following a brief illness. He resided at the University Club.

Dr. Muncaster was born in Montgomery County, Maryland, in 1857. He graduated from Georgetown University School of Medicine in 1885, and later studied in Vienna. He practiced in the District most of his life, in recent years confining his practice to ophthalmology. He was one of the founders of the District of Columbia Society for the Prevention of Blindness.

Dr. Muncaster was an accomplished golfer and the winner of many trophies offered by the American Medical Association, of which he was a member. He was donor of the Muncaster Trophy for an annual tournament of women golfers at the Washington Golf and Country Club.

Dr. Muncaster became an Active Member of the Medical Association of the District of Columbia in 1891 and of the Medical Society in 1892. Life Membership was conferred upon him in 1932. He was a member of the American Academy of Ophthalmology and Otolaryngology, District of Columbia Society for the Prevention of Blindness, and the Medical and Chirurgical Faculty of the State of Maryland. His civic affiliations also included the National Cathedral Association, the Maryland Society of Washington, Lafayette Lodge, A. F. M., No. 18, the Chamber of Commerce, the Lions Club, and the Washington Board of Trade.

Surviving are two daughters, Mrs. George B. Best of Washington, and Mrs. George A. Burns of Miami, Florida.

(*Continued from page 381*)

5. Edwards, M., and Kindell, F. B.: Treatment of rectal lymphogranuloma by excision; report of 6 cases operated on by Lockhart-Mummery procedure. Surgery, 1938, **4**, 809.
6. Ewell, G. H., and Jackson, R. H.: Lymphopathia venereum with stricture of rectum and fistula in ano. Urol. & Cutan. Rev., 1941, **45**, 22.

(*Continued from page 387*)

2. Yater, W. M., and Whitmore, E. R.: Histopathologic study of tissues of 65 patients injected with thorium dioxide sol for hepatosplenography, with follow-up study of 10 old cases. Am. J. M. Sc., 1938, **195**, 198.
3. Yater, W. M., and Cavanagh, J. R.: Diagnosis of solitary liver abscess by means of Thorotrast hepatosplenography; report of case. Ann. Int. Med., 1937, **11**, 404.
4. Yater, W. M., and Coe, F. O.: Ten years' experience with Thorotrast hepatosplenography. Ann. Int. Med., to be published.
5. Reeves, D. L., and Stuck, R. M.: Clinical and experimental results with Thorotrast. Medicine, 1938, **17**, 37.
6. Koster, H.: Thorium dioxide as aid in differential diagnosis of pylephlebitis. Radiology, 1940, **35**, 728.

(*Continued from page 405*)

Castro, wife of the Minister of El Salvador, Sra. de Caceres, wife of the Minister of Honduras, Sra. de Fernandez, wife of the Minister of Costa Rica. Among the guests and members present were Mrs. M. W. Ireland, Mrs. Theodore Wiprud, Mrs. Joseph S. Wall, Mrs. Harry Fowler, Mrs. Henry B. Gwynn, Mrs. Thomas E. Neill and Mrs. Caryl Burbank. Dr. William J. Mallory, guest speaker and local representative of the Medical and Surgical Relief Committee, explained the work which the Committee is doing.

The Auxiliary is concentrating on war work this year. The Red Cross Committee, under the able chairmanship of Mrs. Charles J. McEnerney, is particularly active. One unit is making surgical dressings each Thursday at the Walsh House. After each meeting this year two hours will be spent sewing for the Red Cross in the Library of the Medical Society's building at 1718 M Street, N.W. A course in home nursing has begun, meeting at the Walsh Mansion, 2020 Massachusetts Avenue, N.W.

Mrs. Tomas Cajigas
Publicity Chairman

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6. Make a list of the principal harmful effects of alcohol upon the body.

7. What are the harmful effects which nicotine has upon the circulatory system?

8. As the manager of a department store employing 400 men and women, would you give preference to non-drinkers and non-smokers? Discuss.

9. Do you think it is worse for girls to smoke than for boys? Why?

10. Explain why one who has taken even a moderate quantity of an alcoholic drink is more likely to be injured by extreme cold than a total abstainer.

A SHORT BIBLIOGRAPHY ON ALCOHOL AND TOBACCO

* Andress, J. Mace, and Brown, Maud A.: Science and the Way to Health

* Andress, J. Mace, Aldinger, A. K., and Goldberger, J. H.: Health Essentials

* Bogen, Emil, and Hisey, L. W. S.: What About Alcohol?

Cockefair, E. A., and Cockefair, A. M.: Health and Achievement

Dement, Bertha Stuart: Health and Its Maintenance

Donnelly, Grant L.: Alcohol and the Habit-Forming Drugs

Haggard, Howard W.: The Science of Health and Disease

Hickman, Cleveland P.: Physiological Hygiene

Hutchinson, Woods: The New Handbook of Health

* Moon, Truman J., and Mann, Paul E.: Biology for Beginners

Moss, Fred A.: Applications of Psychology

Stiles, P. G.: Human Physiology

* These books are on the Washington Approved List. The other books listed all contain certain amounts of interesting information on the subjects covered by this outline, and may be found useful for reference.

MEDICAL ANNALS

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WAR CONDITIONS IN THE ROYAL NAVY*

REAR ADMIRAL WILFRID R. PATTERSON

Chief of Staff, British Admiralty Delegation; former Flag Captain of H.M.S. King George V

ADMIRAL SIR ANDREW CUNNINGHAM has been called away on duty and I do not expect him back until Wednesday or Thursday. He had been looking forward to meeting you and asked me to tell you how sorry he was not to be here. I know his absence will be a great disappointment to you all. In fact we are all sorry, he to be away, you not to have him with you, and I, much as I have enjoyed my lunch, am extremely sorry to find myself at this moment in his shoes and trying to give an address to experts. Admiral Cunningham left me his notes and I am making very full use of them.

The subject of the talk which Admiral Cunningham was to have given is that of "War Conditions in the Royal Navy," with particular reference to the Mediterranean Area, which the Admiral commanded for three years, and of which he had firsthand knowledge.

Until June 1940, the Mediterranean was a comparatively peaceful sphere of operations, ships being employed merely on routine contraband patrol duties. In June 1940, however, the picture changed with the entry of Italy into the war. As this event became more and more imminent the Mediterranean forces were built up as rapidly as possible, but war against Germany and the critical situation around our own coasts made the provision of units extremely difficult. In consequence, the Mediterranean Fleet started the war in company with a proportion of French ships but in considerable inferiority to the enemy. Events followed swiftly with the collapse of France which robbed us of the services of a formidable fleet, and, worse still, of invaluable bases, and thus turned in a day a reasonably advantageous position into one of considerable disadvantage. It is from this disadvantageous position, short of bases and in considerable inferiority, that the Mediterranean war had to be waged for the two years of which I am speaking.

To begin with, we had a certain degree of success and were able to beat back the enemy fleet and control the Mediterranean rather well. This was, I think it is fair to say, due to the professional sense of superiority in fighting at sea which we like to believe is a heritage of the British Fleet, and to the outstanding leadership of Admiral Cunningham, but as time went on matters became increasingly difficult. At first we had at least a proportion of neutral countries whose air and sea bases were denied to the enemy. With the successive fall of Yugoslavia, Greece and Crete this advantage was lost to us, and, what was worse, these bases became hornets' nests from which attacks could be launched against our ships. I want you to realize the conditions under which fighting was taking place in 1941, because it is a good example of conditions of modern war at sea.

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* An address given following the Society's luncheon at the Fourteenth Annual Scientific Assembly of the Society, September 29, 1942.

It should be realized that when ships were at sea they were under continual threat of aircraft attack throughout daylight hours. You might expect soon after dawn and then for the rest of the day to see the shadowers coming over far away in the distance, and you could hear them signalling back to their home bases for the formations which you knew would arrive within an hour or so of the call. Our own fighters would soon be in pursuit when aircraft carriers were present to drive off the shadowers, but this action was by no means always effective. In due course the bombing attack on the ships would develop. It might take the form of high level bombing, which is a comparatively innocuous pastime unless you are hit, or of dive bombing, which is psychologically far more startling since the roar of the aircraft diving at a ship and the sight of a machine approaching at 300 miles per hour is a thing which requires a certain amount of time to get accustomed to. These dive bombing attacks achieve moreover a far greater degree of accuracy than a high level attack and have therefore to be treated with a good deal of respect. The third type of attack is that of torpedo bombing, which, though not so spectacular as either of the first two, is even more lethal in that it attacks the underwater portions of the ship and is more likely to lead to a sinking.

As the day draws to a close there is a feeling of relief that a kindly darkness will hide the ships, but first the most trying period of all has to be gone through. As the light fades and until the moon goes down, ships can no longer see to fire at aircraft; but the aircraft can often see the ships only too clearly, and it is perhaps the most trying of all experiences to be in inconveniently close company of a number of enemy aircraft which you cannot see and which you know will endeavor to plant torpedoes in the most inconvenient places. This is the moment of greatest menace from the torpedo bomber.

I have painted perhaps rather a lurid picture because I want to convey to you the strain of modern war conditions under which the commanding officers and crews of ships must necessarily labor. In the days of the 1914–18 war there were the hazards of actual battle with the enemy and the danger from the lurking submarine. These dangers remain, but they are the normal hazards of war. On top of this you have now to pile the constant strain of alertness needed to deal with the continual presence of an enemy who travels so fast that an attack may develop within a matter of minutes. In the last war we were spared this except on specific occasions. In this war the enemy is ever present and even in harbor ships have to be constantly ready to repel aircraft attacks. The result is to put a strain on officers and men which has most carefully to be watched if you are to get the best out of them. Indeed under modern conditions when ships are open to this ceaseless threat of aerial attack, I consider that a year under active seagoing conditions is sufficient at a time for those in positions of responsibility in H.M. Ships, particularly small ships, who have in addition considerable physical strain from the discomforts of small ships in heavy weather.

This leads me on to what is perhaps the main theme that I would like to bring to your notice today. The very conditions I have described make it all the more essential so to act that men are stiffened to face these ordeals rather than to give way to the effects of prolonged strain, and there is no manner in which the doctor can be more effective than in this connection. You do not need me to tell you that fear and fatigue are as infectious as disease. Once it becomes evident to men that if they give in to their natural impulses they will receive sympathy and the chance of avoiding further hardships, the weaker elements will at once tend to take advantage of this fact. The man to provide this treatment is first and foremost the doctor. We had cases where oversympathetic treatment by the doctors had immediate reaction among the ships' companies. In this matter we have got to be hard though understanding. If men show a tendency to weaken in their resolve, the way to deal with the matter is not to take them out of it but rather to put them under conditions which are unpalatable. For instance, there was in one ship a case of a youngster who left his gun during an air attack. That boy was therefore transferred to an anti-aircraft ship where the scale of air attack is at its highest. It was kill or cure, but it cured. In another instance a man having stated that he was unable to stand up to his duty was given a cure which consisted of segregation, no smoking, and no drinking other than water. That man was also rapidly cured. Do not misunderstand me, this is no lack of sympathy. The wrong type of sympathy will not help men in the conditions of modern war, and the right type of sympathy lies in giving men good living conditions and real rest when they are in harbor and watching carefully to drive them only to the point which is reasonably within human limits. In the Mediterranean there are houseboats on the Nile, right away from the sea, in which submarine crews can relax completely. There are hostels away out on the beaches at Alexandria where the men can rest and bathe; a widespread system of canteens, clubs and entertainments has been developed, all to emphasize the relaxation periods for the men. That is the other side of the picture and is every bit as important as the stringent methods to which I have been referring. There was a certain, I regret to say, disgruntled doctor in the Mediterranean who wrote in a letter home, "Admiral Cunningham has ordered that there shall be no nerves in the Mediterranean, and that is that." While the statement was not strictly true, it is the only attitude in which to approach the strenuous conditions of modern war.

A matter upon which I should like to say a word is the question of effects of reaction. This also is a matter that needs careful watching. There are many men who can string themselves up over a long period and who perform great things and show consistent coolness and courage. They appear to be entirely unaffected; but the time comes when the material suffers from overfatigue, and when at length these men return for a period of relaxation they will crack badly. This reaction often takes the form of sleeplessness with all its attendant evils. It is dangerous, therefore, to assume that because a man seems outwardly unaffected, his period of service under strenuous conditions can be prolonged. Men of good character, sober habit of living, and intelligence are noticeably those who stand up best to the strain. We have found it a fallacy that the "tough guy" of peacetime is the "tough guy" under action conditions.

That there is a very definite limit to which men can be stretched was clearly shown at the time of the Battle of Crete. I will quote the Admiral's own words:

"I do not suppose that seagoing men have ever before or since been subjected to such continuously strenuous conditions. Not only did the ships have to keep the sea weeks on end, returning only to refuel for a few short hours, but the ships were, for most of the time, crammed with hundreds of soldiers who were being withdrawn while facing the enemy. Anyone who has been in a destroyer with 600 (sometimes more) people on board, will realize that the ships' companies themselves were entirely precluded from even such rest and comfort at mealtimes as can be obtained in a small ship. If you add to this an unprecedented scale of air attack with very heavy casualties in ships and men and finally the mental handicap of knowing that this was no victorious advance, you can get an idea of what these men were contending with. That they succeeded in removing 90 per cent of the men from Greece and about 70 per cent from Crete is the record of their achievement; but in the last days I was faced with grave decisions in view of the utter exhaustion of officers and men, quite apart from the casualties to ships, and had to consider whether I could possibly justify continuing the work in face of these conditions. But the tenacity of the personnel just held, to their eternal credit, and apart from certain isolated cases which took the form of jumping overboard as the ships went to sea, we were able to win through. But there was not the slightest doubt in my mind that the limit had been reached and that if we had had to ask for further efforts the call would have been more than human flesh and blood could be expected to answer.

"I hope that in discussing that particular aspect of nerves I have not conveyed the impression of a Service full of neurotics. I have mentioned particular situations as representative of this particular problem. I do not for a moment want to leave you with the impression that the standard of courage and devotion of the Mediterranean Fleet was anything but of the highest, indeed it is my proudest boast that I had the privilege to command such men."

These words were written by the Admiral, and I may add that it was the Admiral's personality, determination and inspiring leadership that made those men and the Mediterranean Fleet what they were.

To turn from wider subjects to specific experiences which may be of interest to you, I will refer to one or two matters which may be of use. A matter of particular interest to us has been the problem of dealing with casualties due to the flash of explosions. This is, indeed, a problem in hot climates and one with which you have no doubt been faced in the Pacific. To induce men to spend days at a time dressed completely in overalls is almost an insuperable difficulty, and under working conditions in areas subject to air attack this is the only solution. Arms and legs must always be covered, and in actual action crash-proof helmet and gloves are essential. There was a specific instance of this when H.M.S. Warspite was hit by a bomb which descended into one of the mess decks where the men were taking their ease and were scantily clad owing to the heat. The number who died, or were put out of action, as a result of the flash were numerous and represented by far the major proportion of the casualties. Had those men been fully dressed many of them would be alive today. One can only continue to impress this on those concerned, by every possible means, and by the enforcement of strict discipline in the matter of clothes. It is a hard task, and only when practical experience has been obtained, as after this incident, when the men have seen the effect with their own eyes, can you get them to pay real attention to these points. It is important also, particularly in small ships which do not carry doctors, to train the men in the way to treat burn casualties, particularly if they have been in the water. The tendency is to endeavor to treat casualties and dress their burns, but where professional skill is absent the primary thing to remember is to ensure warmth and complete immobilization.

Another important matter which arises from practical experience is the question of dealing with casualties under the conditions of confusion, maybe darkness and smoke, which will occur after damage in the confined space of a ship. In particular, the necessity for having some clear way of showing whether morphia has been administered is important. Labels get lost and a sound tip is to use a rubber stamp with the letter "M" and mark the patient's head accordingly. A temptation that our doctors have found is to busy themselves about a case where there is virtually no hope. However distasteful it may be not to do so, the time lost in the treatment of such cases cannot be justified when it is at the expense of men who could certainly be saved if they were treated at once.

In these days when too often men are exposed to long periods in boats adrift in the ocean the following points are worthy of note:

Clothing. As much warm clothing as possible is of value, and clothing of some sort is essential when the heat of the sun is likely to be excessive. These points are obvious. It is, perhaps, not so obvious to men that they should not hesitate, for instance, to cut off the bottom of a trouser leg to protect their heads, or to make unhesitating use of dead men's clothes. Sheer necessity may make them do these things in the end, but by then the harm may have been done.

Food. It is important to remember that men can live for something under 30 days without food but only 5 days without water. There is a tendency in stocking boats or rafts to lay more stress on the food than the water. For the reason I have given, this is most unsound. Useful foods that should be used are such things as boiled sweets, barley sugar, and condensed milk. The latter in particular is valuable in being a drink as well as a food. Where water is short the sucking of an ordinary trouser button will keep the salivary gland working, thus keeping the mouth moist. Food on rafts is apt to include biscuits and chocolate. These two well known thirst-producers are far from suitable in any conditions where water is likely to run short.

Barnacle Casualties. A curious form of casualty which was met, particularly in the Mediterranean, where underwater growths form very rapidly upon the ships, is that caused by lacerations from barnacles. These were often extremely severe, since when the ship turns over, its side is apt to be very greasy and men are flung down at considerable speed. These wounds are extremely unpleasant and go rapidly septic. The importance of early treatment is therefore obvious. We also suffered a number of casualties, particularly broken backs, from men sliding rapidly down the side and impinging on the bilge keel. It is of importance that all men should be warned of this danger.

Night Blindness. The conditions in the Mediterranean, of clear water, and continual observation by aircraft, subject the crews of submarines operating there to immense strain. They are often at sea for 28 days on end and during that time never see the sun, since it is necessary to remain submerged during daylight hours. Experiments carried out by the commanding officer of a submarine showed that the time to achieve normal night vision when coming on the bridge at night became progressively greater with the time spent at sea. Thus, at the commencement of the cruise he found that 1 to 2 minutes sufficed but that after 3 weeks he required 7 to 9 minutes. This problem was tackled by means of diet, not an easy matter in a submarine, where the storage of fresh food is always a difficulty. But special foods are provided, and it is interesting to note that whereas the sailor employed in surface ships costs about a quarter of a dollar per diem to feed it was necessary to expend three times that sum to provide the correct diet for the submariner.

Doctors. Finally, may I say a word of tribute to the gallantry of the surgeons in the Fleet, who only bore out reputations of devotion of doctors throughout the ages. Indeed, the only occasion that I can recall in which a doctor failed in his duty was, in fact, before the last War when, during a landing party, the doctor evacuated his casualty clearing station with lamentable, disgraceful speed, owing to the mere trifle that he had set it up on top of a wild bees' nest.

In conclusion, I would like to apologize for being here instead of Admiral Cunningham. You were to have had the privilege of meeting and listening to one of the outstanding figures of the war, a man whose name will go down in history in company with those of Blake, and Hawke, Rodney, Hood and Nelson.

MEDICAL EXPERIENCES IN NAVAL WARFARE*†

ARTHUR J. WHITE, M.D.
Captain, Medical Corps, United States Navy

IT IS my desire to bring to you at this time some of the medical problems which arise in the heat of combat, and during the lull following battle. These remarks will be based on my own experiences, and those of my associates on the ship of whom I am justly proud.

Our organization comprised 4 dressing stations located on 3 decks at 3 levels in that section of the ship where personnel was most concentrated during battle conditions. In each of these stations 1 medical officer and 4 or more corpsmen were stationed. A corpsman from the dressing station accompanied any repair party operating in the nearby vicinity, for the purpose of administering aid on the spot in cases found about the ship. These corpsmen directed the transportation of patients with the help of stretcher-bearers detailed from the members of the ship's band.

In addition to the four well equipped, permanently established dressing stations, there were two collecting stations each manned by one dental officer and one corpsman. Here the equipment comprised a portable dressing chest, well equipped with surgical supplies, and sufficient instruments for minor surgical procedures. The locating of stations, equipping and training of personnel, are the peacetime task of medical officers, along with the instruction of all hands on the ship in the fundamental principles of first aid. Upon the shifting from peacetime conditions to a state of war, one becomes intent upon the study of the organization and the training of personnel. This results in a smoothing out of minor problems and in the course of a few weeks all hands settle down to the job in hand with a feeling that so far as is humanly possible emergencies can be handled as they arise.

Practical points learned from Pearl Harbor and other engagements were:

1. Dispersion of medical supplies including blood plasma and medical department personnel.
2. Necessity for an adequate reserve drinking water supply throughout the ship.
3. Adequate materials for the treatment of burns.
4. Proper indoctrination of all men on the ship in the use of tourniquets, tannic acid jell and morphine. This latter statement may be questioned by some who have had unfortunate experiences with the distribution of morphine aboard a ship. To us it proved very advantageous to have, in addition to the morphine available in our 6 dressing stations, 1 box of 5 one-half grain syrettes in each of 150 first-aid boxes placed in accessible spaces throughout the ship. These boxes also contained tannic acid jell and sufficient shell wound dressings to treat 10 patients. Many of these boxes were used during and immediately following action, and of course some were destroyed by bombs and explosions during and after the battle. Administration of morphine from a syrette, consisting of a collapsible tube with a sterile needle attached, can be taught to most of the ship's personnel by proper demonstration and frequent repetition of instructions. Tannic acid jell, also in collapsible tubes, lends itself well to shipboard use in that it stores easily, keeps well at varying temperatures, and is so readily applied by nonmedical personnel. Its action proved to be effective, and it may readily be supplemented at a later time by the more complicated special

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* Presented at the Fourteenth Annual Scientific Assembly of the Society, October 1, 1942.

† The opinions advanced in this paper are those of the writer and are not to be construed as official or reflecting the views of the Navy Department or the Naval service at large.

burn treatments so necessary to certain areas more deeply burned.

All dressing stations were equipped with 10 per cent silver nitrate solution, along with materials for quickly making a 10 per cent watery solution of tannic acid in case time was permitted for its use. Along with this, each station had sulfanilamide ointment and sulfanilamide powder available. Due to time limitation in our particular case, all burns received tannic acid jell for local application. That, along with morphine and blood plasma for shock, proved effective for early treatment and enabled most of our burn cases to arrive on board accompanying ships in a fairly comfortable state. Dried plasma was used and found to be very essential in the relief of shock. It was given under difficult conditions, yet could be quickly prepared and administered. Swelling and edema of the skin made venupuncture somewhat difficult, but in no case was it impossible to accomplish.

Fluids were given by mouth as freely as conditions would permit with no ill effects, and with great comfort to the patient.

The burns encountered in action were first and second degree in type, many of them flash burns covering extensive areas of the body surface. Much to our surprise, in many cases all clothing had been removed by blast, thus exposing the entire body to the intense heat resulting from bomb and shell explosions. These cases required morphine in repeated doses along with blood plasma to relieve in some degree the intense shock and pain. It was our experience that little local cleansing or treatment other than tannic acid jell was needed or indicated. Burned areas were often charred in appearance and were handled as little as possible. No doubt in some cases this appearance resulted from exposure of perspiring skin to smoke particles rather than to actual charring of tissue. It was a source of satisfaction to see many of these men in the course of 3 weeks after injury with their burns healed and very little scar resulting. Much of this splendid work was accomplished by the medical officers on the ships to which our patients were transferred following the battle and represented hours of work in follow-up treatment. In subsequent reports it was learned that in some cases the sulfonamide preparations had been used with good results, in others tannic acid solution combined with silver nitrate solution had been used with equally good results.

To me the efficiency of tannic acid jell along with its adaptability for first aid work was striking.

Wounds and injuries sustained varied greatly, consisting of blast injuries, combined in many cases with fractures, shrapnel wounds both of the penetrating and nonpenetrating type, intracranial injuries, bullet wounds and toxic gases.

As the result of a bomb hit, associated with the explosion of a ready ammunition locker, 2 officers suffered death almost instantly. One was dead when first seen, and showed no mark of injury on his body. The second had been thrown, or struck by flying missiles, but apparently died from internal injuries within 10 minutes from the time of injury. Other men suffered from the same blast, some surviving a few hours, then dying from what appeared to be lung injury, manifested by hemorrhage characteristic of pulmonary bleeding. Time and circumstances permitted no real study of these casualties, but the circumstances as described by Drs. James D. King and George W. Curtes in *War Medicine* seem to apply to these deaths. Men in this area who happened to be bending near the deck, as was one corpsman while administering artificial respiration, and those lying on the deck were unharmed except for a mental shock.

It has seemed to me for some time that blast of sufficient force to rupture lung capillaries and alveoli must also cause damage within the brain and within the abdominal cavity. Recently such forces have been demonstrated in cases of persons partially submerged in water who were exposed to underwater explosions. Here it has been found that there is real damage sustained by the intra-abdominal structures, the lungs escaping damage because the chest was out of water.

Shrapnel wounds were frequent. One man was observed who received a penetrating wound of the abdomen by a shrapnel fragment of high velocity. This man continued his task as a member of a gun crew for an appreciable number of minutes, then fell dead. To me this feat again demonstrated the high pitch to which the vital brain centers are tuned during action. Men accomplish tasks under most trying conditions of physical injury without registering the pain and shock so frequently encountered under less stimulating circumstances. Men were also observed who died from shock, frozen in the position which obtained at the time of the impact, demonstrating again the deadliness of blast pressure. These men showed little or no evidence of external injury.

Other shrapnel wounds consisted of fragments penetrating soft tissue and severing nerves. In 1 case both the sciatic and popliteal were severed on the same side causing corresponding muscular paralysis. Another suffered bladder and rectal paralysis resulting from a penetrating shrapnel wound in the left buttock. These wounds were treated expectantly with the administration of sulfathiazole and tetanus toxoid, arriving at a base in 3 weeks with wounds clean and about ready for the neurosurgeon. In 1 case X-ray films demonstrated the presence of 8 shrapnel fragments from the size of a pea down to 1 cm. in diameter buried in the left occipital bone, left hand, left buttock, left thigh, left femur and left fibula. All were removed except the piece in the left femur by the medical officer on an accompanying ship. These cases showed a minimum amount of shock, and there was little tendency to infection in such wounds. All were given tetanus toxoid, and it was satisfying to see these patients avoid or escape the old reactions of tetanus antitoxin.

Fractures were seen, but appeared infrequent as compared to damage done by burns and shrapnel. One case received a simple fracture of the left humerus along with a bullet wound of the soft tissues of the corresponding shoulder. The bullet wound was carefully dressed, the arm placed in a sling, and 2 days later the fracture was determined. There had been no pain traceable to the fracture, and although it was a complete transverse type there was no deformity of the arm to draw attention to it. Again the pain response was delayed for a less active interval. Intracranial injuries consisted of those from fracture, concussion and blast. One case showed compound fracture of the left temporal and parietal bones comminuted in type. With all this damage he was able to assist himself in getting to the upper deck following a destructive explosion on the fourth deck below. He also suffered extensive burns, all his clothing including his underwear having been blown off or burned off during the explosion. This man survived for 4 days, but at no time did he become rational. Most of our cases exposed to smoke and gases from improper combustion recovered with little difficulty. One officer who was brought from an area of blast, smoke and battery fumes suffered temporary blindness and loss of memory with some emotional instability. He regained his vision, became emotionally stable, but after 3 months was still unable to retain memory of recent events and happenings. After thorough study it is believed that there is permanent damage to the cerebral cortex resulting from exposure to carbon monoxide. It should be noted that this patient was pulseless and breathing had ceased when he was first seen by the medical officer, who by his prompt and effective administration of artificial respiration saved his life. This again was one of my associates in action.

Bullet wounds are best described by the work of our junior dental officer, who by his excellent work along with that of the corpsman with him relieved much suffering and started 8 patients on the road to a good recovery. Six men were treated for bullet wounds in this station, and 1 was dead with a bullet wound through the heart. Of the 6, 1 received a fracture of the radius and ulna as a result of the bullet. The arm was splinted after the hemorrhage was arrested, and the entire wound was dressed and placed in a sling. Morphine was given to all after their wounds were dressed, and tetanus toxoid was given in each case.

You may be interested to know how the care of casualties was distributed to various dressing stations. In the aviation battle dressing station, located immediately under the flight deck near midships, about 90 casualties were treated, 68 of whom were retained. Here excellent work was accomplished by the flight surgeon, who methodically surveyed his work as it came in, treated the more serious first, placed the less serious in bunks in living compartments nearby, and gave instructions to his corpsmen for their care. He had completed his first time around, cleaned up his dressing room, and was preparing for his secondary operative work when he received word to evacuate his patients to the flight deck for abandoning ship. Disappointed as we all were, he proceeded with the task assigned and accomplished it in a workmanlike and successful manner.

In the forward collecting station we had the misfortune to lose our senior dental officer as a result of the bomb hit along with the explosion of a nearby ammunition locker. The dressing chest with all supplies was destroyed at this station, necessitating the establishment of a new dressing station in the captain's cabin. Supplies had been brought up from the main battle dressing station, located in the main sick bay, 3 decks below. This had been accomplished immediately after the action, at which time we received word of the damage and word that there were numerous casualties in this area. This was the only damage sustained by our 6 dressing stations during the attack.

One hour following the attack the main battle dressing station was damaged by the first heavy internal explosion. This necessitated moving our patients, about 15, to the main deck and using our improvised station in the captain's cabin. The total casualties here amounted to approximately 25, some of whom were ambulatory. Work progressed satisfactorily here for a period of about an hour, when we were driven from the cabin by smoke and forced to move all patients to the flight deck for safety from fire and smoke. Explosions were now taking place in various sections of the ship, and the medical officer with his corpsmen from the engineer's battle dressing station was called to the hangar deck where 25 men, severely burned and some suffering from smoke inhalation, were treated. These also had to be evacuated to the flight deck hurriedly because of spreading fires with the accompanying smoke fumes, making the hangar deck untenable.

The 8 patients, 6 with bullet wounds and 2 with burns, treated by the junior dental officer have been discussed and were removed to the flight deck at this time. After battle, dressing stations received no casualties, but functioned as a source for drinking water supply to men working in that area from the engineer's department. From the flight deck some patients, mostly stretcher, were removed to small boats for transfer to accompanying ships. Others who were able to help themselves were removed directly to destroyers, and still others were removed to life rafts and later picked up by accompanying ships. This was only accomplished through the support and effort of all available men and officers on the ship, to whom due credit is given for their untiring effort in helping us to accomplish our assigned task.

THE COMMUNICABLE DISEASES OF CHILDREN

Their Prevention, Control and Treatment[*]

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DURING wars and in the wake of wars, it is well known that there is a great increase in the occurrence of communicable diseases due directly to the accumulation of individuals in camps and barracks and to the overcrowding of centers of population incident to the war effort. The term "camp fever," as applied to typhus fever and cerebrospinal meningitis, denotes the stigma of war as well as the increased incidence of these diseases during the martial period.

Another factor of importance is the gathering into intimate association of groups of thousands of comparatively young individuals, even at the ages of 18 or 19, who are "selected" because of their freedom from chronic disease, but among whom there may be a large proportion which have not experienced many of the transmissible diseases of the young, often because of the lack of schooling during their early life which entailed lack of exposure to contagions.

As noted by Stokes,[1] during the last war 200,000 cases of mumps were recorded, and mumps caused the largest number of days of absence from the army. Also there were recorded 98,000 cases of measles resulting in over 4,000 deaths. These figures are probably minimal and do not represent the actual devastation of measles from its complicating pneumonia and its companion war disease, influenza, the malignancy of which among the martial and civil population will long be remembered.

Under the Communicable Disease Regulations for the District of Columbia, issued by the Health Department in 1940, there are listed 47 reportable diseases which run the alphabetical gamut from amebiasis to yellow fever.

Furthermore, in the case of 14 of these diseases listed, it shall be the duty of physicians (or other persons in charge of persons affected . . .) "to report by telephone forthwith the existence of such disease in addition to a report in writing," a legal directive with which it might be well that members of this Society become familiar, inasmuch as ignorance of the law carries no priority of defence in case of violation.

Turning from the meticulously worded regulations of the Health Department just quoted, it might not be without interest to revert to some of the earlier efforts made by mankind to control the spread of communicable diseases, some of which, especially the treatment of fomites and the disinfection of habitations, seem to have left their imprint for good (or for nil) even down to the present age.

According to Garrison,[2] the outstanding achievement of the Assyrians and Babylonians in public hygiene was their perception of the transmissibility of leprosy, which took the practical line of expulsion of the leper from the community. "Never more shall he know the ways of his abiding place" was a phrase appearing upon the stone landmarks of Babylon, and engraved thereon some 3,500 years ago. During the Assyrian captivity (722 B.C.) and the Babylonian captivity (604 B.C.) of the Jewish people they developed a high degree of hygienic consciousness as attested by the many writings in the Bible and the Talmud relegating to the high priests the function of health officers and prescribing in great detail regulations for the control of leprosy as well as gonorrhea and leukorrhea, termed "issues," and considered by many historians to be actual Neisserian infections.

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[*] Presented at the Fourteenth Annual Scientific Assembly of the Society, September 29, 1942.

Leviticus contains specific directions both for diagnosis and for isolation in cases of suspected leprosy requiring that, "When a man shall have in the skin of his flesh a rising, a scab, or a bright spot, and it be in the skin of his flesh like the plague of leprosy; then he shall be brought unto Aaron the priest. . . . If the bright spot be white in the skin of his flesh, and in sight be not deeper than the skin, and the hair thereof be not turned white; then the priest shall shut up him that hath the plague seven days; and the priest shall look on him the seventh day; and, behold, if the plague in his sight be at a stay, and the plague spread not in the skin, then the priest shall shut him up seven days more; and the priest shall look on him again the seventh day, and, behold, if the plague be somewhat dark and the plague spread not in the skin, the priest shall pronounce him clean; it is but a scab; and he shall wash his clothes and be clean." However, should the diagnosis be leprosy, the unfortunate victim's clothes are rent, afterwards burned, and "he shall dwell alone; without the camp shall his habitation be." This enforced isolation probably resulted in an early exitus, in many cases, and thus the removal of the focus of infection. The house of the leper was thoroughly renovated, after being shut for 7 days, even necessitating the removal of stone walls and new plastering. Should a second case of leprosy occur in the house, it was promptly demolished and the rubble cast without the city limits.[3]

Diphtheria was so much feared by the Hebrews that the first case located in a community was immediately heralded by a warning blast of the shofar, although the instrument was ordinarily sounded only after the occurrence of the third case of an infectious disease.[2]

In early Hindu writings mention is made of the plague which constituted the most dreaded communicable disease in early and mediaeval times, and people are advised to desert their houses "when rats fall from the roofs above, jump about and die."[2]

The Black Death of the plague from the twelfth to the end of the seventeenth century created havoc among the peoples of Asia and Europe and gave rise to many efforts for its control. Among the most beneficent was the establishment of "quarantine" for a period of 40 days, as its name implies, which arose from the epidemic of 1374. The terror of this disease resulted in the wholesale abandonment of homes and towns, an instance of the former being graphically recorded by Boccaccio in his Decameron.[4]

Boccaccio estimates that upward of a hundred thousand beings perished within the walls of the city of Florence between March and the following July from the "pestiferous sickness," and the fear engendered caused several of his acquaintances, 7 ladies and 3 gentlemen, to flee the city and isolate themselves in the suburban dwelling of a friend. These voluntary "isolationists" escaped the ravages of plague, thus demonstrating the propriety of their action, although the tales told to lessen the tedium of their enforced idleness may be a bit without the bounds of propriety.

Down through the succeeding centuries some progress was made, at times crude and ineffective, toward the control of communicable diseases, often meeting with opposition from the laity, actuated by motives of pleasure or business (even as in the present day); sometimes resulting in shotgun quarantine against cholera and yellow fever prevalent in the last century and upon one occasion in 1858 in an attack upon and destruction of the Quarantine Station in Staten Island, New York, by citizens who had been tormented for fifty years with devastating yellow fever epidemics attributed to its lax administration. The local court sustained this assault as an "act of salutary and well-intentioned violence."[2]

From Aaron, the biblical health officer, down to the present-day inspector of the health service, the incumbent of this office evidently did not lead the "life of Riley."

Even the nineteenth century revealed but slow progress in the provision of facilities for the care of contagious diseases, and it is within the recollection of many of us that such were called pesthouses; nor were the unfortunate patients treated with much greater consideration than that accorded "pests" in general.

PREVENTION

In its relation to this discussion of communicable diseases, the word "prevention" may be considered to encompass procedures and methods to secure permanent immunity, to achieve transient (passive) immunity, or to lessen the virulence of disease.

Newborn infants are immune up to several months of age to measles, scarlet fever, poliomyelitis, diphtheria, rheumatic fever, and usually at birth to pneumococcal and influenzal infections. This immunity is derived from the mother and is mostly passive in character. The basis of this selective immunity to disease possessed by the infant may be due to (1) transplacental transmission of (a) antigen from the mother, resulting in active intrauterine immunization of the fetus, and (b) antibodies from the mother, producing passive intrauterine immunization; (2) transmission of antibodies from the mother to the infant through colostrum and milk; (3) tissue immunity of the rapidly growing infant, which may explain the lack of response of certain infants to the Dick and Schick tests, which may be positive in their mothers.[5]

This immunity of the newborn infant to certain diseases is soon replaced by susceptibility far greater than that of the older child, which is apparently due to a deficiency in the capacity of the infant to produce antibodies.[5] This fact is of importance in considering the timing of artificial immunization, which should be undertaken in the second half of the first year of life when hereditary immunity is wearing off, and when its presence will not interfere with satisfactory "takes" of that attempted artificially.

The knowledge that this mother-offspring immunity exists has stimulated speculation and actual research as to the possibility of fetal immunization, an example of which is the use of vitamin K during the latter days of pregnancy to prevent prothrombin deficiency in the newborn.

McKhann notes the use of tetanus toxoid administered to the mother to protect the infant in certain sections of Africa and in China, where childbirth tetanus is very common.[5]

Brescia,[6] reporting last month on a study of 200 mothers and their infants, states that 26 per cent of the mothers tested were Schick positive. He found in the case of mothers with positive Schick tests that 52 per cent of their infants up to 4 months of age gave positive tests; after 4 months of age, 100 per cent of the previously negative babies gave positive tests. In the case of mothers who were Schick negative, their infants up to 4 months of age were all Schick negative but gradually became positive in the second half of their first year, until between 12 and 18 months of age 100 per cent were positive. Brescia advises that all pregnant mothers be Schick-tested and that if positive, immunized, and if immunization be refused, that their infants be immunized at 1 month of age.

I have under my care an infant 2 years old who has been persistently negative to repeated Schick tests. The mother, a schoolteacher, continued her work throughout the larger part of her pregnancy, having under her care several classes of small children who from time to time were being immunized by school physicians. In order to impress her small charges with the fact that "it didn't hurt," she repeatedly had the physician give her a dose of toxoid, 7 in all, she claims. The result speaks for itself in her offspring.

A paper was presented before the Section on

Pediatrics at the Atlantic City meeting of the American Medical Association, June 10, 1942, on the "Placental Transmission of Pertussis Antibodies Following Inoculation of the Pregnant Mother." [7]

Perhaps the millenial day will arrive when the obstetrician will call in the pediatrician during the second month of pregnancy so that both may collaborate toward the desideratum of bringing into this world a healthy infant whose health may be further guaranteed during the early months of life. But it must be borne in mind that natural, inherited immunity, as well as that artificially conferred prenatally, is but passive and transient.

Active immunization against a number of diseases is accomplished by introducing into the body of the child suitable doses of killed organisms, or of the detoxified products of bacterial growth, in such amounts and at such intervals as will secure the most prompt and lasting production of immunity.

In certain diseases for which skin tests have been developed to ascertain the presence of immunity or its lack, the physician must acquire the skill to successfully produce a "wheal." Such ability is easily acquired and may in turn be taught to the nurse or office assistant if a few simple precautions are followed, to wit: The forearm of the child, grasped between the thumb and fingers, must be held firmly; any tension on the skin by the fingers must be exerted in the longitudinal axis of the arm and not the transverse; the needle must be small (27 gauge, $\frac{3}{8}$ inch long), and held nearly parallel to the skin with the bevel in contact with it. There should be a distinct sense of resistance when the piston is depressed and a white, elevated swelling should appear showing on its ischemic surface the tiny dots of the sweat glands. Too deep a puncture will result in a failure to produce a wheal or in the appearance of pseudopods jutting out from the site of the injection. Satisfactory test reactions are only produced following the procurement of perfect "wheals."

The conferment of "passive immunity" will be considered in connection with the prevention or modification of the common communicable diseases of childhood.

DIPHTHERIA

The remarkable fall in the morbidity and mortality from this disease is demonstrated in a report on diphtheria mortality appearing in the August 29, 1942 number of the *Journal of the American Medical Association.*[8] The death rate from diphtheria in Washington, per hundred thousand of population, has dropped from 77.9 in the period 1890–1894 to 0.3 in 1941, and one third or more of the reported diphtheria deaths were stated to be in nonresidents. This satisfying reduction in mortality, which equally signifies prevalence, within our City must be largely, although not entirely, attributed to the increased practice of immunization against the disease. Statistics compiled by the Health Department show that in the year 1941, 12,558 children were immunized against diphtheria by the Department and by private physicians. However, during the same year 18,303 infants were born within the District. Thus, immunization is not keeping pace with the birth of infants within our boundaries.

A high rate of immunity, barely short of 100 per cent, may be secured by the use of 3 doses of fluid toxoid or of 2 (better 3) doses of alum-precipitated toxoid, spaced at intervals of 3 or 4 weeks. Preliminary testing in infancy is quite unnecessary, although follow-up Schick tests should be done after the expiration of 4 or 5 months, with repeated treatment in positive reactors. Probably the optimum time for this immunization lies between 7 and 9 months, with retesting of the child upon its entrance in primary schools. The "answer to the maiden's prayer" of health officers for a 1 dose alum-precipitated toxoid has fallen into the discard because of the transient nature of the immunity thus invoked.

Opinions vary as to the length of time immunity to diphtheria may be secured. If this varies from 5 to 10 years, the protection it confers during those years when diphtheria is most common and most fatal must be granted and the thought kept in mind that immunity is gradually acquired by contact with the organism in older children without the actual disease being experienced. Toomey[9] states that his attention has been directed by the U. S. Public Health Service to the fact that the persistence of Schick negativity is due less to the original antigen than to previous and subsequent experience of an individual with the diphtheria bacillus. They point out that 1 dose of alum-precipitated toxoid is at present sufficient for 85 to 95 per cent in Alabama (where carrier prevalence is high), while 2 doses are necessary in Michigan, where the prevalence is low. In addition, children in Michigan need a stimulating dose at about school age.

Passive immunity to diphtheria may be secured by the administration of 1,000 or more units of antitoxin, but its ephemeral effect must be realized and subsequent lasting immunity conferred by the methods just described, in the case of children who are Schick positive.

SCARLET FEVER

There can be no question but that scarlet fever has been decreasing in virulence in recent years. However, the complications of the disease are still to be feared, notably those of the kidneys and ears, so that efforts for the protection of the young child must be encouraged.

G. F. and G. H. Dick, who isolated a beta-hemolytic streptococcus now almost universally recognized as the cause of the disease, have developed a skin test for immunity or its lack, which consists of the intradermal injection of 0.1 c.c. of a standardized toxin containing 10 skin doses per c.c. Contrary to the Schick test which is read on the sixth or seventh day, thus doing away with a control, the Dick test must be interpreted at the expiration of 20 to 24 hours. Dick insists that the slightest reddening, no matter how faint, constitutes a positive reaction if it measures as much as 10 mm. in any diameter.[10]

Children showing susceptibility may be successfully immunized by the administration of increasing amounts of the toxin as measured in skin test doses, beginning with 500 S. T. D., which is increased at weekly intervals up to 80,000 or 100,000 S. T. D. Reactions, especially after the larger doses, are apt to be severe, may be constitutional and accompanied with fever, angina and a scarlatiniform rash. Immunity to scarlet fever seems to begin much earlier than the comparative immunity induced by diphtheria toxoid, but is less lasting in duration. The violence of reaction in some children and the comparative mildness of the present-day scarlet fever has militated against the use of this proven method of securing immunity, but its field is certainly well established in the protection of children congregated in boarding schools, institutions and colleges, nurses and interns in hospital service, and inhabitants of communities wherein scarlet fever is unusually prevalent. Melnick[11] fails to see the consistency of those who recommend immunization of nurses, inmates of orphanages and other institutions, but do not employ it in general practice, claiming that scarlet fever is the same disease in the home that it is in an institution. He reports freedom from disagreeable reactions by preimmunization preparation consisting of the use of a laxative the evening before treatment and a diet of cereal waters, stewed fruit and juices, tea and toast on the day of injection, the injections to be given in the late afternoon and all muscular activity restricted after them.

In an attempt to reduce reactions, several observers have given intradermal inoculations of scarlet fever toxin, the latest report being that of Jacobs and Orris,[12] who claim but 1 per cent of severe, and 1.7 per cent of moderate reactions after using one tenth of the usual doses, there being 98 per cent of negative reactors on testing 2 to 4 years later.

Passive immunity in Dick positive contacts may be secured by the giving of a prophylactic dose of scarlet fever antitoxin, but here again, local reaction and delayed serum sickness may outweigh the advantages to be obtained in escape from possible infection by a disease which is escapable by a 50-50 margin in any event.

MEASLES

The first epidemic of great proportions suffered by our troops concentrated in our camps during World War I was due to measles, and there can be no doubt but that an increased prevalence of this contagion among the children of the civil population will be reflected in an increased incidence among the armed forces. Due in all probability to a virus which has a special tropism for lung and bronchial tissue, the disease possesses serious import because of its companion satellites, the pneumococcus and the streptococcus, to the presence of which most of the mortality may be ascribed. These two organisms complicating measles seem less vulnerable to sulfonamide drugs, which makes the prevention or modification of measles a most desirable aim of therapeutics.

Fortunately, although not possessing as yet a specific immunizing agent offering lasting immunity, we do have it within our power to passively prevent or to greatly modify measles through the use of convalescent or immune serum of those who have had the disease, or by the administration of Placental Extract (Immune Globulin) as developed by McKhann and his collaborators.[13,14,15] The success of the prevention or modification of measles by the administration of Placental Extract depends upon the two factors of proper "timing" and sufficient dosage.

In infants who have outgrown their 5 months of immunity, in the delicate child, during the season when streptococcal disease is prevalent, and in schools and institutions, in which the progress of an epidemic is apt to be associated with heightening virulence, Placental Extract should be given about the fourth day, or before, to attain prevention, and between the fifth and eighth day after exposure to secure modification of the disease. In many instances this modification is synonymous with permanent vaccination against a subsequent attack and may be preferable to total prevention. The dosage must be adequate to the age and the weight of the child and may be repeated once or twice after the initial dose, especially if total prevention is desired. Single exposures at schools or parties thus treated give the best results; the repeated battering-ram action of continual home exposures may vitiate the results of such efforts at prevention.

The occurrence of measles in epidemic form in late winter and spring, a season for which the streptococcus also shows an affinity, would warrant the administration of the sulfonamide drugs as adjuvants to treatment in the prevention of streptococcal complications.

WHOOPING COUGH

Whooping cough has proven much more refractory to prevention and control than either diphtheria or scarlet fever, obviously, for several reasons. It is a disease of insidious onset resembling a mild respiratory infection with occasional but increasing severity of cough, the spells of coughing having, even fairly early, a reiterative or repetitious character, the mother stating that the child "coughs in a row." It has no rash to signify its presence, the red color of which might provide the signal light to remove the offender from neighborhood traffic. There is no easy nor early bacteriologic test excepting the cough plate and the nasopharyngeal swab of Bradford and Brooks,[16] both difficult and time-consuming in interpretation. It is highly contagious in the mild, doubtful, initial stage, but we do not possess a skin test to determine susceptibility or immunity.

In the District of Columbia whooping cough has a mortality of twice that of scarlet fever and diphtheria combined, 1.5 per 100,000 to 0.7 per 100,000.

Its spread to the armed forces would mean a considerable loss in man-power days because of the long period of quarantine which in most localities extends to within 5 days of the original "quarantina" of 40 days.

Active immunity in a large proportion of children may be secured by the administration of a vaccine as developed by Sauer[17] consisting of phase I Hemophilus pertussis bacilli in doses of 80 to 100 billion divided into 3 periods with a spacing of injections of 3 or 4 weeks. The earlier vaccines of 10 billion per c.c. were replaced later by 20 billion per c.c., but a third concentration of 15 billion per c.c. was accepted largely as the preferred dosage. Because of the short period of birth immunity, immunization should be performed at the sixth or seventh month, even earlier if the disease is prevalent in a community, since the height of immunity is not reached before 4 months after vaccination.

Gratifying results from immunization have been reported by Sauer,[18] who found in a series of 1,304 vaccinated cases an average of 92 per cent protection, by Kendrick and Eldering,[19] and by many other observers. There have been others who report disappointing results, such as Doull[20] in a Cleveland experiment and Siegel,[21] but it must be said, in evaluating reports pro and con, that those built upon clinic sources of material, for obvious reasons, would not reflect as favorable results as when based upon the experience of private practice.

My own experience has been quite satisfactory; I have seen many instances of escape from home infection after immunization, as well as evident modification in the disease among those who failed to avoid infection.

It is certainly evident that vaccination with potent strains, as measured by opsonic, agglutination, and complement fixation methods, greatly raises the immunity of the child's body by producing high titers of antibody response which in the light of our present knowledge assures some degree of protective armor.[22,23]

A second immunization with a small "booster" dose of 5 or 10 billion is recommended at the age of 5 or 6.

Passive immunity and the means for its conferment will be spoken of under the discussion of control and treatment.

OTHER DISEASES

Smallpox prevention is an accomplished fact to which I shall devote but little space in this discussion, since this scourge has been eliminated in all communities possessing the intelligence to insist upon vaccination of school children, thus producing an immune population. However, in certain sections, notably California, in which this intelligence is lacking, the punishment fits the crime, and smallpox becomes both prevalent and vocal in upholding the benefits of vaccination. Since birth immunity is practically nonexistent, as shown by Dr. H. H. Donnally of this Society, vaccination should be done in the early months of life when it creates but little disturbance to the body.

Vaccination against poliomyelitis has proved a failure as well as a menace, if partly alive, attenuated virus is used. Nor do we possess any active immunizing agent against chicken-pox or mumps. That against epidemic influenza has been considered in the first paper of this morning's session by Dr. Joseph Stokes.

COMBINED VACCINATIONS

To avoid the expense and discomfiture to the child of a long series of immunizations, attempts are now being made with exceedingly gratifying results to give combined or multiple vaccinations, in many of which the tetanus toxoid as a preventive agent has been included.

Daughtry-Denmark[24] suggests increasing the pertussis count to 40 billion per c.c. and claims that "combined pertussis vaccine and diphtheria and tetanus toxoids, alum precipitated, shows excellent possibilities for the giving of three immunizations in one." Bigler and Werner,[25] Lapin,[26] who spaces his combined injections at monthly intervals for 5 treatments, Kendrick,[27] and Sauer and Tucker,[28] using combined pertussis vaccine and diphtheria toxoid, with carefully controlled antibody and antitoxin estimations, when tetanus toxoid has been included, all report favorably and even see an enhancement or synergistic action resultant upon combined vaccination, which is a desideratum devoutly to be wished by both physician and child.

CONTROL

The word control is used to embrace measures for the prevention of the spread of communicable disease by the patient or through the medium of nonimmune or immune contacts, the latter including attendants and "carriers."

Adequate isolation throughout the period of infectivity should remove the menace of transmission from the patient, although opinions differ as to the length of the quarantine period of the various ailments in question. As stated by Wheatley,[29] "In the light of present knowledge of the communicability of most of the diseases, the periods of quarantine and isolation have been too long. As more precise information regarding communicability is gained, the trend is toward the shortening of these periods."

Periods of isolation and restrictions applied to contacts are provided in the health department regulations of all communities and are usually as inflexible and immutable as the laws of the Medes and Persians. It is only within recent years that isolation from school for mumps was reduced to 14 days from 21 days, and even at the present time a child with mumps may attend school up to the time he has a face resembling a full moon, while in the case of chicken-pox he may attend up to the time when he resembles a speckled hen in appearance without violating regulations. Much more would undoubtedly be accomplished by relaxing somewhat the rules relating to the patient and endeavoring more precisely to control the actions of "exposées," as they may be called.

Control of the patient and prevention of cross infection in hospitals, aside from the use of individual rooms, is best accomplished by some form of cubicle system. The summum bonum of control may be reached only by the use of violet light barriers as reported by Sauer, Minsk and Rosenstern[30] and others who have had the financial resources to equip the institutions with which they were connected with this expensive equipment. Commonly, resort must be had by most hospitals to individual cubicle equipment and a careful cubicle technic as outlined by Stimson[31] and Top.[32]

Isolation within the home, although it has distinct advantages for the patient, is more difficult to carry out. The sheet tacked over the door of the sickroom, drenched with some foul-smelling disinfectant, is most useful in keeping out human invaders, although its utility in keeping within the isolation quarters the cause of the disease is open to question.

Contacts, especially nonimmune children, constitute as much of a menace as the patient himself, who is more or less effectually isolated during his sickness. Contacts or "exposées," furthermore, offer a much more open field for preventive endeavor which should be exercised with far more effectiveness than is at present accomplished.

Loss of school time by useless exclusion both in terms of academic handicap inflicted on the child and in the economic loss to the state of absenteeism, might be reduced in volume by more common sense regulation of periods of exclusion. It would seem that no jeopardy to the health of the community would be incurred by permitting school attendance and freedom of play for exposed children in the case of whooping cough for 8 days, mumps for 14 days, measles for 9 days, and chicken-pox for 12 days. Isolation and school exclusion after the expiration of these periods could then be invoked with adequate protection to others.

In the handling of contacts, when efforts are to be made to secure either freedom from the disease or its modification, passive immunity may be conferred by the giving of the antitoxin sera of diphtheria or of scarlet fever, and in the case of measles, mumps and whooping cough, by the use of convalescent or hyperimmune sera, the last being the most effective.

Barenberg and his co-workers[33] have shown the value of giving pooled parental serum or plasma at the Morrisania City Hospital in which during the past 7 years complete protection against contagion from new admissions was afforded by this method, including the years 1940 and 1941, when measles prevailed extensively in New York City.

Active immunizing agents mentioned previously in this discussion are completely without merit in the treatment of "exposées." Pertussis antigen in my hands has proved useless to secure passive immunity and equally so in treatment. This has been the experience of Kramer[34] and Miller.[35]

Bradford[36] in 1935 compiled an extensive review of the use of blood from convalescents and adult immunes and demonstrated its utility.

By far the most important agent in the control, as well as in the treatment of whooping cough, is hyperimmune serum as developed by Kendrick,[37] McGuinness, Bradford and Armstrong,[38] and Cohen and Lapin,[39] and now made available through the Philadelphia Serum Exchange of the Children's Hospital, 1740 Bainbridge Street. This serum, produced by the lyophile method, and checked by repeated assays, possesses an agglutination titer 10 times that found in convalescent blood.[40] It is a powdered, human blood serum obtained from healthy male adults between the ages of 21 and 30 who had had whooping cough in childhood and who had been given 3 courses of Sauer's vaccine (Lilly) containing 10 billion organisms per c.c. at 4 months' intervals. About 1 month following the third course of vaccine (about 13 months after the beginning of the initial course) the donors were bled and the serum separated.[38] Intramuscular injections of 20 c.c. are given exposed children at 48-hour intervals for 3 doses. Reactions are trivial, and the results show the highest average of success attained by any known method of passive immunization. McGuinness records in 83 cases 78.3 per cent of complete protection and 13.3 per cent of very mild disease.[38] Cohen and Lapin[39] in 100 cases of intimate exposure protected two thirds of their cases and modified the rest.

Personal experience with hyperimmune serum, although limited, has been equally satisfying. To quote a striking example of complete protection, I might instance the case of a baby between 2 and 3 months of age whose 5-year-old brother contracted severe pertussis from a playmate whose parents embraced the Christian Science faith. In June of this year the baby received 3 injections of hyperimmune serum of the Philadelphia Serum Exchange and developed absolutely no symptoms of the disease. It might be claimed that this infant, 2 months and 12 days old, still retained its mother's birth immunity, but such an argument fails in the light of the fact that the mother herself contracted a severe case of whooping-cough from the older child, adding to the jeopardy in which the baby was placed.

Passing, but none the less important, reference can be made within the limitations of this paper to the control of communicable diseases for which preventive measures are at present wanting. Rigid control and isolation of the victim of open, communicable tuberculosis offers the only solution to prevent the infection of the young and especially the causation of tuberculous meningitis with its always fatal outcome. The BCG vaccination of Calmette has secured but little recognition in this country although used abroad. The control of chicken-pox, poliomyelitis, cerebrospinal fever and typhoid fever (other than the well recognized vaccination which should be accorded every older child) must be accomplished by proper policing of the patient in his infectious stage; that of impetigo of the newborn by efficient hand technic in the newborn nurseries; and that of infectious diarrhea of the newborn by purity of food supply, prompt isolation of affected babies, and immediate closure of obstetrical nurseries to new admissions until thorough disinfection has been accomplished therein.

TREATMENT

The prevention, modification and control of communicable disease in children has been considered at some length in this discussion on the principle of locking the door before the horse has gone; he may be a most useful animal in the production of a valuable antiserum, and to him should be accorded all homage.

Diphtheria, except some virulent forms known to occur in certain European countries which seem to be serum-resistant, is still successfully combated by the early administration of adequate doses of antitoxin.

Much advance has been made both in diagnosis and treatment by the use of direct laryngoscopy and by the application of endoscopic drainage, which in many cases has resulted in the avoidance of intubation or tracheotomy, both of which are associated with considerable mortality.

In the treatment of scarlet fever, the use of convalescent and hyperimmune serum and of the specific antitoxin certainly shortens the course of the disease and prevents the likelihood of complications. Sulfanilamide and related sulfonamides have proved helpful in the hands of many.

The clinician, faced with discouragement because of the failure of remedial agents he is employing in the treatment of whooping cough, will find solace and no small degree of comfort should he read the remarkable review by Isaac Abt of the history of therapeutics in the treatment of this disease, in which he records claims of virtue on the part of lay and medical therapeutists for a list of remedies from decoctions of centipedes and cockroaches to the dung of screech owls and a draught made of sweet milk boiled with the excreta from an ass.[41]

The use of pertussis antigens by hypodermic or by nasal instillation is usually disappointing, although some amelioration of number and severity of paroxysms may be secured by the administration of ether-oil mixtures by the rectal route, of paraldehyde similarly employed, and of the various barbiturates. The use of solutions of gold by mouth and of silver by nose drop is not at all commensurate with the precious values of these metals accorded them in commercial life. Here again, convalescent blood and hyperimmune serum offer most in the way of therapeutic success.

In the treatment of measles measures should be adopted to prevent, if possible, concomitant infection of the host by streptococci, the occurrence of which may be limited by culture of the throats of attendants and new admissions to hospital wards. During World War I the practice was evolved of culturing all measles and suspected measles cases so that those soldiers harboring the streptococcus might be isolated in a so-called contaminated ward to prevent the passage of this organism, responsible for a large part of the morbidity and mortality from pneumonia and empyema, to measles patients free from such contamination. Mention has already been made of the use of the sulfonamides both in the prevention of invasion and in the treatment of lesions due to secondary invaders.

In passing, the latest conceptions in the treatment of meningococcal and influenzal meningitis by a combination of antisera (or antitoxins) and the sulfonamides would appear to be the confinement of such therapy to the intravenous route with a diminishing practice of their use intrathecally.

In the case of poliomyelitis, attention should be directed to the growing regard afforded the so-called Kenny treatment which is increasing in favor among those who have familiarized themselves with its use, especially the experiences related by Stimson,[42] Pohl,[43] and Krusen.[44]

Summary

1. Prevention, modification and control of the communicable diseases of children offer the highest reward both for the direct benefits conferred on the children of a community and for the reciprocal relationship to lessen the incidence of such contagions among the armed forces of the Nation, which is a distinct desideratum in the general war effort.

2. Proven and well established measures for immunization against many contagions should be employed, not more extensively but universally by all physicians assuming the care of children in their practices and not alone by pediatricians and public health agencies to whom they have been largely relegated.

3. Emphasis has been placed upon the necessity of acquiring the simple but necessary technic for the testing of children.

4. Matters of exact doses and timing periods used in immunizing procedures have not been unduly emphasized because of the fact that the pedagogical practices of manufacturers and their visiting representatives, to whom all credit be due, include minute specifications within the packages of reagents now available to every physician from his corner drug store.

1864 Wyoming Avenue

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ARTERIOVENOUS FISTULA BETWEEN THE ASCENDING AORTA AND THE SUPERIOR VENA CAVA

Report of a Case

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ARMSTRONG, Coggin and Hendrickson[1] in a recent paper found 98 cases of spontaneous arteriovenous fistula between the ascending aorta and the superior vena cava reported in the literature. They added 2 cases of their own. Since their article at least 2 more case reports[2,3] have been made, but the latter add nothing to the conclusions already reached by Armstrong et al. Including the present case the total number of cases in the literature is now at least 103.

The differential diagnosis of this condition is sometimes quite confusing. Our case presented some features which made it quite impossible to tell whether we were dealing with superior vena caval occlusion or with arteriovenous communication between the superior vena cava and the aorta.

REPORT OF CASE

W. T., a colored man 44 years of age, was admitted to the medical service of the Georgetown University Hospital on November 26, 1940, complaining of swelling of the eyes, face, neck, and the right upper extremity, of 9 hours' duration. He had been perfectly well until 5 o'clock on the morning of admission, when he was awakened by a "stiffness and pulling in the throat." He became somewhat alarmed, arose from bed, looked into a mirror and found his neck greatly swollen on both sides, his face very puffy, and his eyelids swollen almost shut. His right upper extremity was also somewhat enlarged and slightly stiff. Since he noticed that he felt much better in the erect position he went back to bed and propped himself up with several pillows. When he awoke for a second time, several hours later, he felt better and thought the swelling had gone down a good deal. About 11 o'clock the same morning the swelling again became severe and was accompanied by pain in the right arm and beneath the scapula. Upon arriving at the hospital he felt as if he were choking from the pressure in the neck. All the symptoms became aggravated when he lay down. A brassy cough developed shortly after the onset and was accompanied by expectoration of small amounts of clear mucus.

The past history revealed that he had had "buboes" in 1915 in the right groin and had been admitted to a hospital where the glands were incised and drained. He denied ever having had a chancre or any secondary lesions of syphilis. He joined the army in 1918 and had his blood tested. Although he was not told he had "bad blood," he was given injections in his arm and "hip" for 14 weeks; after an interval of 2 months, he was transferred to another army camp where he received 6 more injections and after arriving in France was given 12 additional treatments. Since then he has received no further treatment. He denied gonococcal infection. About 10 years previous he had received a stab wound in the chest just to the left of the upper part of the sternum. The rest of the past history and the family history were noncontributory.

Physical examination revealed a well developed and well nourished colored male who appeared to be about the stated age. There was marked edema of the eyelids, face, and neck and moderate edema of the entire right upper extremity and right hemithorax. The mucous membranes of the head were moderately cyanotic, as were the nailbeds of both hands. All the veins leading from the head and neck, right and left upper extremities, and right hemithorax were moderately dilated. Breathing was slightly labored, apparently due to laryngeal obstruction, since there was occasional stridor, hoarseness and brassy cough. The eyes presented no abnormalities other than edema of the lids and cyanosis of the conjunctival mucous membrane. The ocular fundi were normal in all respects. The teeth were carious. The mucous membranes of the mouth and throat were cyanotic but were otherwise normal. The engorged veins of the neck filled only from above and there was no evidence of venous pulsations in any of the veins. The edema did not pit on pressure.

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The chest was normal in shape. All of the superficial veins, especially those of the right hemithorax, were dilated. A diastolic shock was palpable over a wide area in the right upper chest anteriorly. There was an area of dullness and absent breath sounds which extended from the midsternal line to the right as follows: 1st intercostal space, 8 cm., 2nd intercostal space, 9 cm., 3rd intercostal space, 10 cm., and 4th intercostal space, 8 cm. No expansile pulsation was noted. On auscultation over this same area there was a soft, blowing, continuous murmur with a systolic accentuation. There were no palpable thrills. The second aortic sound was snappy and had a metallic ring. It was audible over the entire area described but was loudest over the aortic valve area.

Examination of the heart revealed the apex beat to be 10 cm. from the midsternal line in the 5th intercostal space, while the clavicle was 16 cm. long. There was a moderately loud systolic murmur at the apex which was not widely transmitted. No diastolic murmur could be ascertained in the third intercostal space to the left of the sternum. The rhythm was regular, and the heart rate was 90 per minute. The aortic second sound was much louder than the pulmonic second sound. The blood pressure was 134/74 in the right arm and 124/74 in the left arm.

Except for some diminished tactile fremitus and roughened bronchovesicular breathing in the right upper lobe adjacent to the area of dullness previously described, the lung fields were clear.

Venous pressure measurements (direct method) on the second day following admission were 560 mm. of saline in the right arm and 440 mm. in the left arm. There were no pulsations noted in the manometer tube during the measurements. Venous blood from the antecubital vein was much darker than blood from an adjacent patient taken from the same vein simultaneously.

Several urinalyses were negative. Hemograms taken at various intervals showed that the red blood cells numbered 3,410,000 with 11 Gm. or 66 per cent hemoglobin (Haden-Hauser), and the leukocytes 9,400, with 10 per cent band forms, 59 per cent segmented polymorphonuclears, and 31 per cent lymphocytes. Both Kahn and Wassermann tests of the blood were strongly positive. The sedimentation rate (Wintrobe) was 27 mm. in 1 hour, corrected to 12 mm. The prothrombin time was 8 minutes, the coagulation time (Lee and White) 8 minutes, and the bleeding time 5 minutes. The qualitative van den Bergh reaction was negative, and the quantitative test showed 0.5 mg. of bilirubin per 100 c.c. of blood. An electrocardiogram showed only sinus tachycardia at a rate of 105 per minute.

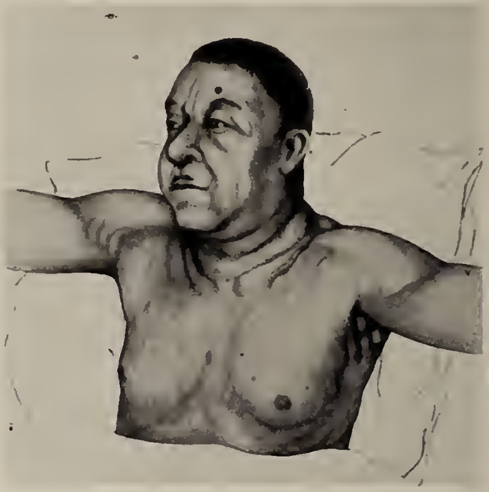

Fig. 1. Edema and distended veins.

Roentgenographic examination of the chest shortly after admission was reported as follows: The heart measurements were: "MR 6.5 cm., ML 10 cm., chest 30.5 cm. Thus the heart occupies 54 per cent of the transverse diameter of the chest, and is enlarged both to the right and to the left. The transverse diameter of the great vessels measures 13.5 cm. There is a fusiform aneurysm of the ascending aorta. The lung fields are clear." Examination of the chest "after ingestion of thick barium shows displacement of the esophagus to the left by the aneurysm."

The temperature remained normal, except for an occasional rise to 100°F., for the entire hospital stay. The pulse fluctuated between 85 and 100 per minute until a month before death, when it ranged between 100 and 120. The respirations varied between 20 and 25 per minute.

During his stay in the hospital the edema slowly and progressively increased, although at times during the first 4 weeks there were periods during which it would recede somewhat. Gradually there developed an extensive collateral venous circulation. All of the veins of the head and neck, right and left upper extremities, thorax and abdomen became tremendously dilated and tortuous and the valves insufficient (fig. 1). The thoracoabdominal venous anastomosis was especially prominent. The finer radicles on the chest were ruptured here and there causing ecchymosis into the skin. The edema finally increased to such a degree that it involved both sides down to the level of the umbilicus. The skin was very tense and it seemed almost impossible to stretch it any more.

Venograms (using Thorotrast) after injection simultaneously into the median cubital veins (25 c.c. on each side), on the left side showed marked dilatation of the brachial and subclavian veins with an abrupt obstruction about 10 cm. from the midline of the left subclavian vein (at about the midclavicular line). Some of the Thorotrast entered the collateral circulation (fig. 2). On the right side, there was much less dilatation, none of the Thorotrast passing beyond the neck of the scapula, although a considerable quantity entered the collateral circulation.

The venous pressure on the 41st hospital day was 600 mm. of saline in the right arm and 580 mm. in the left arm. Following 1 minute of opening and closing the fist the pressure rose 40 mm. more on each side. The venous pressure in the right femoral vein was 190 mm. The arm-to-tongue circulation time, using 5 c.c. of 10 per cent magnesium sulfate, was 51 seconds on the right side and 49.5 seconds on the left side.

On the 55th hospital day the blood pressures in the arms were 116/70 on the right and 120/74 on the left. The blood pressures in the lower extremities were 162/90 on the right and 164/94 on the left.

Repeated roentgenograms of the chest revealed no change in the original condition. There were no significant changes in the laboratory data during the entire course.

During the last week he gradually developed more and more hoarseness and more and more respiratory difficulty; the cough became more severe, and he had small hemoptyses, until finally a loud stridor developed. Death occurred 111 days after the onset and was caused by asphyxia from laryngeal obstruction due to edema of the larynx.

Necropsy revealed the body to be that of a colored male approximately 45 years of age. It was well developed and nourished. There was extensive and massive edema of the entire head and neck, both upper extremities, and the thorax down to the level of the umbilicus. The edematous areas pitted only slightly on pressure. The veins of the head, neck, upper extremities, thorax and abdomen were all greatly dilated and tortuous. The axillary veins were particularly prominent. The thoracoabdominal venous anastomotic system was beautifully outlined. There were an extremely large number of very fine venous radicles over the entire chest which were markedly varicose. Many of these finer twigs had ruptured, producing ecchymoses. Other than chemosis of the conjunctiva and badly carious teeth, the external examination of the head and neck revealed nothing further. On making the primary Y-shaped incision the blood poured from the greatly dilated subcutaneous veins as if under considerable pressure, and large amounts of edema fluid oozed from the tissues. The peritoneal cavity contained about 100 c.c. of amber-colored fluid. There were no adhesions. The pleural cavities were normal except for some moderately firm adhesions at the apex and base of the right lung. The heart was slightly enlarged. It weighed 375 Gm. The chambers were slightly dilated. The pericardium, myocardium, and endocardium presented no gross abnormalities. All of the valves appeared to be normal. At its origin the aorta showed typical syphilitic aortitis and moderate atheromatous plaques. About 3.6 cm. above the root of the aorta was a fusiform aneurysm which measured 8.5 cm. in length and 6.5 cm. in its widest diameter. The wall was thin and showed mild "tree-barking." There were no atheromatous plaques or blood clots in the aneurysm. On the right lateral wall there was an 0.8 cm. circular opening into the superior vena cava. The margins of this communication were rolled and healed. The superior vena cava was much constricted where it lay in contact with the aneurysm.

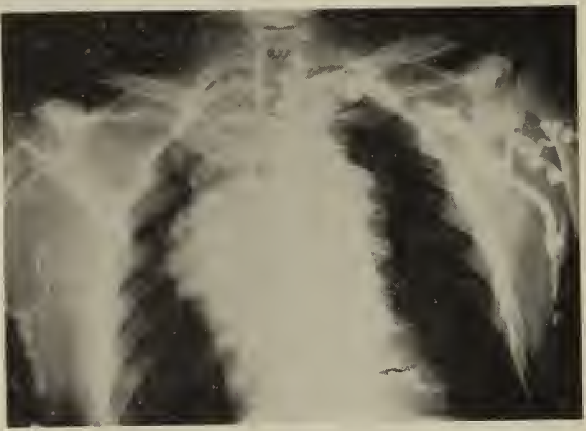

FIG. 2. Thorotrast venogram showing obstruction of flow and tortuosity of veins, and aneurysm of ascending aorta.

At its opening into the right auricle, the superior vena cava measured 2.1 cm. in diameter; 4 cm. above this the lumen was narrowed to a diameter of 1 cm. and remained constricted up to its origin, a distance of 7.5 cm. There was a moderate amount of fibrous tissue about the aorta and superior vena cava. All of the veins in the thorax were greatly dilated, and the thoracic duct was similarly affected. The thicknesses of the walls of the ventricles were: left, 1.7 cm. at the apex, 2.4 cm. midway between the apex and the mitral valve, and 1.5 cm. just below the mitral valve; right, 0.5 cm. at the apex, 0.3 cm. midway between the apex and the tricuspid valve, and 0.4 cm. at the base. The pulmonary valve measured 2.4 cm. in diameter, the aortic 2.5 cm., the mitral 2.7 cm. and the tricuspid 2.9 cm. The coronary arteries were normal throughout. The lungs revealed numerous anthracotic areas. Both lungs were subcrepitant throughout and on section mild congestion was seen. The stomach was markedly distended, extending much below the umbilicus. The liver was of normal size, but on section there was slight congestion. There were no other abnormalities.

The anatomic diagnoses were as follows:

1. Syphilitic aortitis.
2. Syphilitic aortic aneurysm of the ascending aorta.
3. Arteriovenous fistula between the aneurysm of the ascending aorta and the superior vena cava produced by spontaneous rupture of the former into the latter.
4. Varices of the great veins of the head, neck and thorax.
5. Stenosis of the glottis due to edema.
6. Edema of the upper half of the body.
7. Healed Ghon tubercle.

The cause of death was given as asphyxia due to edema of the glottis.

Comment

The differential diagnosis of this case lay between complete obstruction of the superior vena cava by thrombosis and arteriovenous fistula between the aneurysm and the superior vena cava. The edema, cyanosis and venous distention in the distribution of the tributaries of the superior vena caval system could have been caused by a sudden thrombosis of the superior vena cava which had already been encroached upon by the large aneurysmal mass. An occurrence of this sort would be more likely to occur during sleep, when the venous blood flow is slowest because of the absence of gravity as a factor in the return of blood from the head and the diminished pumping action of the movements of the thoracic cage. Of course, these symptoms are equally well produced by an arteriovenous communication in this region.

The murmur did not have the qualities usually considered characteristic of that produced by blood flowing through an opening between an artery and vein. Instead of the harsh, often rasping, continuous murmur waxing with systole and waning with diastole, usually heard for some distance along the course of the artery involved and quite frequently accompanied by a thrill, the murmur in this case was not transmitted, was not harsh, and was not accompanied by a thrill. Such a murmur is occasionally heard over an uncomplicated aneurysm of the aorta.

The blood pressure was not that usually associated with such fistulae since there was no widening of the pulse pressure. No venous pulsations were found when the venous pressure was measured by the direct method. Armstrong et al.[1] emphasize the importance of this sign and admit that it was responsible for making the correct diagnosis in their cases.

Another disturbing fact was the dark color of the venous blood. With large arteriovenous fistulae the venous blood is almost arterial and therefore brighter rather than darker.

Since this case presented three of the diagnostic criteria as laid down by Pepper and Griffith,[4] viz., (1) signs of obstruction of the superior vena cava, (2) sudden onset, and (3) evidence of a tumor in the thorax and the probability that it was aneurysmal, more significance should have been given to the presence of the murmur. However, since the murmur was not characteristic and there were no peripheral signs of arteriovenous fistula, such as collapsing pulse, high pulse pressure, venous pulsations, and marked persistent tachycardia, its importance was overshadowed. The sign of Hall and Rowlands, an increase in the blood pressure in the lower extremity over that in the upper extremity with the patient in the recumbent position, was present in this case, but in weighing it against the other factors it did not receive its full appreciation.

The mechanism of production of symptoms in these cases is the same as if an organic obstruction to the superior vena cava did exist. Instead of a thrombosis or occlusion by external pressure, however, the high pressure created by the blood flowing from the aorta into the vena cava prevents any venous return from the venous tributaries which carry a much lower pressure. In fact, there would actually be a reversal of flow were it not for the extremely low pressure in the right auricle and ventricle during diastole. Thus, since the pressure in the last portion of the vena cava is greater than the pressure anywhere else in its venous tributaries there is virtually a physiologic obstruction past which there is no venous blood flow. In cases in which the abnormal opening is above the opening of the azygos vein some degree of collateral circulation is established and the effects are noted only in the head and neck. When the opening is below the azygos the thorax becomes involved down to the level of the umbilicus.

Summary and Conclusions

1. A case of spontaneous arteriovenous fistula between an aneurysm of the ascending aorta and the superior vena cava is reported.

2. Although the diagnosis was seriously considered and thoroughly discussed, the absence of a continuous harsh murmur with systolic accentuation, thrill, red venous blood, and venous pulsations made a definite diagnosis impossible.

3. These signs are evidently not essential to the diagnosis of spontaneous arteriovenous fistula between the ascending aorta and the superior vena cava. Sudden appearance of edema of the upper half of the body with cyanosis and great elevation of the venous pressure in a patient with an aneurysm of the ascending aorta probably usually denotes the onset of a spontaneous arteriovenous fistula between the aneurysm and the superior vena cava, since the only other possible condition, thrombosis of the superior vena cava, is perhaps much more rare.

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Find new treatment for burns saved 30 out of 32 patients. Treatment employing 2.5 per cent sulfadiazine, a member of the sulfanilamide family of drugs, in 8 per cent triethanolamine, an emulsifying agent and solvent useful for applying certain medicaments to the skin, was found to be valuable in 30 of 32 patients with second and third degree burns, Milton Rothman, M.D.; Joseph Tamerin, M. D., and Jesse G. M. Bullowa, M.D., New York, report in *The Journal of the American Medical Association* for November 14, 1942. The area burned varied from 12 to 45 per cent of the body surface. This recovery rate is very high in view of the severity and extensiveness of the burns. The treatment they used is a modification of one reported last year by K. L. Pickrell, M.D., at Johns Hopkins Hospital.

The solution was applied by spraying on the surface of the burn every hour on the first day, every two hours on the second day, every three hours on the third day and every four hours on the fourth day. The wound was dried by fanning or with warm air after each application. A translucent scab formed in twenty-four to thirty-six hours and alleviated pain and the need of frequent dressings. There were no reactions from the sulfadiazine and the solution may be employed without irritation or constriction about the face, mouth, eyes, joints and fingers.

President's Page

DEMONSTRATIONS WIN PUBLIC APPROVAL

Perhaps no project undertaken by the Society has been viewed with such skepticism as was its participation in the recent Community War Fair. When it was first proposed to a group of physicians representing the various hospitals that mock surgical operations be performed on a stage at the Uline Arena, there was no protest but one sensed that some were perturbed by the thought. They were perfectly agreeable to giving talks but "play acting" was a little too much. In fact, several withdrew and it was not until others had been recruited that the demonstrations were undertaken. The success of this project is shown by the fact that hundreds of persons were present for every performance during the Fair. Much favorable comment was also heard.

Some physicians feared that mock surgical operations would not be accepted seriously and the dignity of the profession impaired. There was really no reason for concern because the "operations" were exceedingly well done. Commentators made it clear that this was an educational program presented for the purpose of making the people of Washington conscious of the contributions made by local hospitals. They also emphasized the personnel and costly equipment required in the performance of surgical operations. The results of these efforts were far more gratifying than any physician could have foreseen.

This experience has encouraged the belief that the Medical Society of the District of Columbia might well sponsor a public health exhibit on an ambitious scale following the war. There is no more effective way to bring to public attention the facts which they should know about disease and its prevention and treatment.

Mention should be made of the talks which were given by physicians before each demonstration. It is reliably reported that these were uniformly excellent. Some twenty physicians participated in this phase of the program.

Personally, I am very much pleased that an undertaking so new to the medical profession here and one which was viewed with such skepticism should have won approval from laymen and physicians alike. Much credit is due Dr. John A. Reed and Dr. Charles Stanley White and members of their Committee, and to them I wish to express my appreciation.

Editorials

SUPREME COURT WILL REVIEW MEDICAL CASE

On June 15, 1942 the United States Court of Appeals for the District of Columbia affirmed the judgments of the District Court of the United States for the District of Columbia, finding the American Medical Association and the Medical Society of the District of Columbia guilty on an indictment charging a conspiracy for the purpose of restraining trade in the District of Columbia in violation of Section 3 of the Sherman Act.

On July 3, 1942 the American Medical Association and the Medical Society of the District of Columbia filed a petition with the Supreme Court of the United States seeking writs of certiorari to the United States Court of Appeals for the District of Columbia for the purpose of having the Court of Appeals' decision reviewed by the Supreme Court.

The United States opposed the granting of writs of certiorari and filed a brief in opposition.

On October 12, 1942 the Supreme Court granted writs of certiorari and agreed to review the decision of the Court of Appeals on the first three questions presented by the petition of the American Medical Association and the Medical Society of the District of Columbia.

The questions which the Supreme Court agreed to review are as follows:

1. Whether the practice of medicine and the rendering of medical services as described in the indictment are "trade" under Section 3 of the Sherman Act.

2. Whether the indictment charged or the evidence proved "restraint of trade" under Section 3 of the Sherman Act.

3. Whether a dispute concerning terms and conditions of employment under the Clayton and Norris-La Guardia Acts was involved, and, if so, whether petitioners were interested therein, and therefore immune from prosecution under the Sherman Act.

The brief for the petitioners, the American Medical Association and the Medical Society of the District of Columbia, was filed with the Supreme Court on October 26, 1942. To date the brief of the United States in opposition has not been filed.

The Supreme Court of the United States has set the case for oral argument for the week of December 7, 1942.

Briefly, the petitioners, the American Medical Association and the Medical Society of the District of Columbia, in their brief contend as follows:

I

That the word "trade" as used in Section 3 of the Sherman Act does not include the practice of medicine and the rendering of medical services as those activities are not commercial in nature.

Under that contention it is argued that the natural meaning of the word "trade" does not include the learned professions; that judicial decisions, including decisions of the Supreme Court, under the Sherman Act, defining the word "trade" have excluded the learned professions and that the legislative history of the Sherman Act requires a definition of the word "trade" that excludes the professions.

II

That the indictment does not charge nor the proof show a "restraint" of trade in violation of Section 3 of the Sherman Act.

In that connection it is contended by the petitioners that in order to violate the Sherman Act a restraint must be intended or shown that fixes prices or suppresses competition to the extent that market prices are affected to the injury of the public. As there was no such charge and no such proof petitioners contend this prosecution must fail.

III

That a dispute concerning terms and conditions of employment of doctors, in which the petitioners, the American Medical Association and the Medical Society of the District of Columbia, were interested was involved and hence under the Clayton and Norris-La Guardia Acts the present case was not within the Sherman Act.

In that connection it is contended that Group Health Association, Inc. sought to employ members of the Medical Society of the District of Columbia to perform corporate medical work of Group Health Association, Inc., and that the controversy that ensued, under the Clayton and Norris-La Guardia Acts, is declared by Congress not to be a violation of any law of the United States, including the Sherman Act.

Petitioners closed their brief by contending that the attempt never should have been made to stretch an old statute to new uses, to which it is not adapted and for which it was not intended.

After the case is argued before the Supreme Court during the week of December 7, members of all the learned professions will await with the keenest interest the decision of the Supreme Court on the novel contentions presented in this, the first prosecution of a learned profession, under an anti-trust statute.

WARREN E. MAGEE

THE THERAPEUTIC USE OF ANTICOAGULANTS

General interest in research on the use of anticoagulants in the prevention and treatment of disease is due in no small part to the lively discussion of the value of such therapy in subacute bacterial endocarditis. The initial reports of the use of heparin in this disease were made the subject of an editorial in the MEDICAL ANNALS for December 1939.[1] Unfortunately, the first promise of success with this method of treatment has not been fulfilled. It is true that Kelson, in commenting on a report by Leach et al.[2] on chemotherapy and heparin in subacute bacterial endocarditis, maintained the opinion that heparin is an important part of the treatment. His reasons were that a greater incidence of success has been obtained with combined therapy than with chemotherapy alone, that heparin has not been objectionably dangerous in his considerable experience, and that cases in which death has occurred during or soon after the administration of heparin have shown an unusual degree of healing of the endocardial vegetations. On the other hand, other authors have pointed out that all of the cases in which combined therapy was used successfully were ones in which chemotherapy alone might well have been effective. Furthermore, the incidence of subarachnoid and cerebral hemorrhage has been alarming to some; and Friedman,[3] who was one of the first proponents of the theory intended to provide a rationale for using heparin in bacterial endocarditis, states that he now believes it to be of no value. McLean, Meyer and Griffith[4] in their critical review of the literature on the subject conclude that the results secured in the 67 cases reported to the date of their review do not warrant further trial of the treatment by heparin according to the plan used. They suggest that if heparin treatment is to be continued, another plan must be devised for its use and an attempt made to study the problem under conditions of more rigid scientific control.

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[1] Hussey, H. H.: M. Ann. District of Columbia, 1939, **8**, 370.

[2] Leach, C. E., and others: J. A. M. A., 1941, **117**, 1345.

[3] Friedman, M.: Arch. Int. Med., 1941, **67**, 921.

[4] McLean, J., Meyer, B. B. M., and Griffith, J. M.: J. A. M. A., 1941, **117**, 1870.

Meanwhile, the use of heparin in the prevention or treatment of peripheral vascular thrombosis, particularly venous thrombosis, has received much attention. Crafoord and Jorpes[5] used heparin routinely as a prophylactic against postoperative venous thrombosis in 325 patients who were over 35 years of age and in whom major operations of varying types had been performed. The drug was started 5 hours after operation and was given in 4 intravenous injections daily for from 5 to 10 days. No postoperative thromboembolic complications developed in this group of cases, as compared to an incidence of 9 per cent of thromboembolic complications in 1,111 control cases. The same result was obtained by Murray[6] who administered heparin by continuous intravenous drip postoperatively in 440 cases. These studies are not intended to imply that heparin should be used in every surgical case. Rather, they provide a basic statistical experience which undoubtedly will be extended by reports of the use of heparin in medical and surgical cases in which the likelihood of thromboembolic complications is greater than in the average case.

Murray,[6] McClure and Lam,[7] Priestley et al.,[8] and Lam[9] have independently reported on the use of heparin by continuous intravenous drip for lengths of time varying from 5 to 15 days in a total of about 200 postoperative cases of venous thrombosis or pulmonary embolism. In this combined experience there were only 3 cases in which patients developed subsequent fatal pulmonary embolism and only about 7 cases in which patients showed subsequent nonfatal thromboembolic episodes. Furthermore, some evidence exists that recovery from the initial thrombotic or embolic episode was expedited when heparin was given. These results are in startling contrast to the usual statistical expectation[10] that if a patient has had one postoperative nonfatal embolism, he has about 1 chance in 5 of subsequent fatal embolism, 3 chances in 5 of subsequent embolism (fatal or nonfatal), and about 1 chance in 2 of a second thromboembolic episode of some sort. It must be concluded that the routine administration of heparin, at least in cases of nonfatal postoperative pulmonary embolism, is justified, in spite of the expense and trouble entailed.

Favorable effects from the administration of heparin have been reported in other important conditions. These include surgical procedures such as splenectomy, operations for mesenteric thrombosis, embolectomy, and other operations directly on blood vessels. In these procedures, the use of heparin has seemed especially important for the prevention of postoperative arborization thrombosis or thrombosis at the site of operation. It seems probable that experience in vascular surgery during the present war will greatly extend our knowledge of the usefulness of the drug in this connection. Results of administration of the drug are also quite promising in cases of cavernous sinus thrombosis[11] which were treated with one of the sulfonamides as well. Here, the heparin is employed to prevent the extension of the thrombosis while the sulfonamide exerts a sterilizing effect on the blood and spinal fluid.

An exceedingly bright aspect of all of the literature on the use of heparin in conditions other than subacute bacterial endocarditis is the very low incidence of complications and of serious complications in particular. This does not mean that the drug can be used carelessly or injudiciously but does imply that thoughtful and careful employment of the substance is justified in other than large research institutions.

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[5] Crafoord, C., and Jorpes, E.: J. A. M. A., 1941, **116**, 2831.

[6] Murray, G.: Arch. Surg., 1940, **40**, 307.

[7] McClure, R. D., and Lam, C. R.: J. A. M. A., 1940, **114**, 2085.

[8] Priestley, J. T., Essex, H. E., and Barker, N. W.: Proc. Staff Meet., Mayo Clin., 1941, **16**, 60.

[9] Lam, C. R.: Ann. Surg., 1941, **114**, 205.

[10] Barker, N. W., Nygaard, K. K., Walters, W., and Priestley, J. T.: Proc. Staff Meet., Mayo Clin., 1941, **16**, 17.

[11] Schall, L. A.: J. A. M. A., 1941, **117**, 581.

[12] Butt, H. R., Allen, E. V., and Bollman, J. L.: Proc. Staff Meet., Mayo Clin., 1941, **16**, 388; J. A. M. A., 1942, **118**, 1003.

[13] Butsch, W. L., and Stewart, J. D.: Arch. Surg., 1942, **45**, 551.

[14] 3,3′-methylene-bis-(4-hydroxy-coumarin).

Lately, reports[12, 13] are accumulating in the literature on the use of a new anticoagulant, tentatively called dicoumarin compound.[14] This is a white, crystalline substance prepared from spoiled sweet clover hay. It has an effect similar to that of heparin in prolonging the prothrombin time and clotting time of the blood. Its exact mode of action is uncertain, but probably its anticoagulant properties depend upon inhibition of the function of the liver in forming prothrombin. Apparently there are certain important differences between the action of dicoumarin compound and that of heparin: (1) Dicoumarin requires 24 hours before it begins to affect coagulation; heparin is immediately effective. (2) Dicoumarin acts when given by mouth as well as when injected; heparin must be given by vein. (3) The anticoagulant effect of dicoumarin lasts for some time (days) after administration of the drug is stopped, and the prolonged prothrombin time and clotting time can be restored to normal only by blood transfusion, and this only temporarily until the effects of the drug have "worn off"; the anticoagulant effect of heparin disappears very soon after its administration is stopped. (4) Dicoumarin has a dilating effect on the minute blood vessels; heparin does not.

With these differences of action well in mind, scientists at several large research institutions are conducting a careful study of the use of dicoumarin compound as a substitute for heparin. While the preliminary reports are favorable, much more experience under rigidly controlled experiments will be necessary before this new anticoagulant can be generally employed. It is to be hoped that the presentation of such experience will be soon forthcoming, because of the advantages of slight cost and ease of administration by mouth which dicoumarin holds over heparin.

Hugh H. Hussey, M.D.

THE MEDICAL ASPECTS OF CHEMICAL WARFARE

The history of chemical warfare discloses that military advantage was never gained by an attacking force unless the other side had no defense against the agents used. In World War I the Allies suffered heavy casualties when chemical agents were first used against them because they had relied upon the treaty signed by Germany and the other nations of Europe at the Hague Conference of 1899 which prohibited the use of gas in warfare. Consequently they were caught completely by surprise and did not have any means of defense against such weapons. With the development of the gas mask and means to avoid and to decontaminate toxic chemical agents, serious casualties from these agents diminished and chemical warfare ceased to be a weapon of military advantage.

The lessons of World War I thus show us the importance of an adequate defense against all weapons that might be used. Although the enemy is busy on several fronts at the present time, it is quite possible that an all-out attack against the United States may come later. Just what form such an attack might take is obviously not predictable. The Office of Civilian Defense has therefore set up a defense against all modern methods of attack including chemical warfare. It has been decreed that civilians be taught how to protect themselves against gas and that physicians be trained in the diagnosis and treatment of chemical warfare casualties.

Last summer, at the direction of the Office of Civilian Defense, members of the faculties of the medical schools in this area were sent to Edgewood Arsenal to take a four-day course in the medical aspects of chemical warfare. Complete and up-to-date information about the treatment of chemical casualties, as developed by the Arsenal Medical Staff and its research consultants, was presented. District physicians who received this training have formed a faculty to teach this subject to local physicians. The faculty is now working under the immediate direction of the Emergency Medical Service for Civilian Defense in the District of Columbia.

The first session of a six-hour course, which was divided into three two-hour periods, was presented on October 21 and the second on November 11. Attendance was most satisfactory, 124 physicians signing up for the entire course. The third and final session will be held on December 16.

The course, designed for doctors, has been strictly on a scientific plane. Every physician in Washington and the Metropolitan Area who has availed himself of the opportunity to acquire knowledge in this phase of medicine which is somewhat remote from ordinary practice will be adequately prepared to treat casualties from sabotage or gas warfare. Upon completion of the course, certificates will be given physicians who attended all sessions.

Joseph H. Roe, Ph.D.
Oscar B. Hunter, M.D.

PERTINENT PARAGRAPHS

October Meetings

The month which began on the closing day of the 14th Annual Scientific Assembly was an extremely busy one. As the following list discloses, activities of the Society, its committees and sections have steadily accelerated.

Meetings held during October were as follows:

October 5	Section on Gastroenterology
October 8	Subcommittee on Tuberculosis Section on Neurology and Psychiatry
October 9	Grievance Committee
October 12	Board of Censors
October 14	Scientific Meeting of Society
October 15	Subcommittee on Tuberculosis
October 20	Committee on History
October 21	Postgraduate Course in Chemical Warfare
October 22	Section on Pediatrics
October 26	Membership Committee Executive Board
October 28	Scientific Meeting of Society
October 29	Subcommittee on Tuberculosis
October 31	Section on Pathology and Laboratory Medicine

★

Back to Red Flannels

Medical advisers to the Office of Price Administration state that public health will not be impaired by maintaining the rationing temperature of 65 degrees in American homes during the coming winter and suggest the slogan, "Keep the Home Fires Burning—Low."

A report to OPA made by Dr. Leverett D. Bristol, Public Health Director of New York City, prepared with the assistance of the American Medical Association, the United States Public Health Service, and medical schools and health associations, listed the following suggestions and recommendations to householders:

Use little or no heat in bedrooms and use the bathroom as a dressing room.

Lower house temperatures to 50 degrees during the night.

Eat right, go to bed early, wear heavier clothes and get plenty of exercise.

Pull down shades at night, and rearrange furniture if necessary, in order to avoid drafts.

Keep living room well heated at the expense of the dining room, hall and kitchen.

Provide children under 4 years of age with at least 70 degrees of heat.

Provide persons over 65 with from 70 to 74 degrees of heat.

Insulate and install storm windows, or convert to other than oil heat if possible.

Attention is called to conditions in England where people have never been used to as high temperature in their homes as Americans. The British seem to like it that way but that is not a particularly impressive argument why we should.

Furthering the war effort by conserving fuel is another matter, and we are perfectly willing to go back to red flannels if by so doing we can hasten the day of victory. Whether many of us can put on enough clothing to feel comfortable at lower temperatures remains to be seen. At any rate, it will be a more healthful thing to do. Appearances will go for nought and we will bundle up as we used to in the days of the base burner.

The report suggests that hospitals be heated to 70 degrees while operating rooms be kept at 80 degrees. It is also recommended that physicians or panels of physicians act in an advisory capacity to local boards, passing on doctors' certificates as to the need for supplemental rations of fuel oil. This, it is pointed out, would aid the sick, protect the physician, and safeguard the public.

★

The Pro of Socialized Medicine

There was a time when socialized medicine was a topic which medical men could not discuss without considerable heat. Although some physicians are still very sensitive on the subject, the views of the leftists are no longer as disturbing to the profession in general as they were. Doctors now discuss socialization of medicine—whatever that may mean to the individuals participating in the discussion—much more objectively than they did a year or two ago. It is significant too that medical journals publish views contrary to those of the organizations or institutions which they represent with more frequency. An example of this is an article appearing in the October issue of the *Connecticut State Medical Journal* entitled, "The Debate on Socialized Medicine—A Layman's View." It is written by E. Wight Bakke, Professor of Economics at Yale University. In its editorial columns, the *Journal* sets forth its reasons for publishing this article:

> "This Journal welcomes the opportunity of placing before its readers . . . papers dealing with the social aspects of medicine. This is in keeping with the policy to present to our audience all sides of controversial questions in which physicians have definite interest. Professor Bakke's paper represents a point of view not only of an individual but one which exists in the minds of others in his field who are attempting to solve some of these complicated and difficult problems."

In expressing his views, Professor Bakke has this to say:

> "The twentieth century has witnessed in every industrial nation of the world a development of a large number of social services by which the efforts of individuals to protect themselves against the major hazards to economic security have been modified and organized through community action. Particular attention has been paid to the hazards of industrial accident, unemployment, old age, and sickness. . . .
>
> "None of these services has been subject to debate which has approached the level of confusion and even bitterness that characterizes the movement for attention to the social and economic problems connected with the practice of medicine. Compulsory health insurance and group medical practice have been identified with each other and both at times identified with socialized medicine, Prussian bureaucracy, and revolutionary Communism. Once so characterized the debate has often lost contact with the reality of need and adjustments appropriate to it, and has become a fight between those called by their opponents collectivist socialistic reformers on the one hand and selfish individualists and protectors of vested interests on the other. The dust thrown up by this debate has clouded the issues and confused both participants and the public.
>
> "As a student of societal affairs and as one who is neither a reformer nor an individual with any conceivable vested interest in the outcome, I have been impressed by two things. Whatever knowledge most of the reformers may have of the economic and social problems involved in sickness, they appear to have little grasp of the realities of medical practice. It seems equally evident that whatever knowledge and skill the doctors possess relevant to medical practice and the prevention and cure of illness, they have (with certain outstanding and brilliant exceptions) demonstrated little grasp of the socio-economic problems which concern the reformers.
>
> "I have no solution to this problem to propose or

defend. But as a student and as an ordinary citizen I have reflected a good deal on the issues involved. . . .

"First, it does not seem unreasonable to believe that the two aspects of the problem, the *payment for* medical services and the *provision of* medical services can be separated. . . .

"A second conclusion is that there is no essential reason why the fee system of payment is the only one which results in the type of service and doctor-patient relationship most conducive to the renewed good health of the patient. . . .

"In the third place . . . it should not be impossible for the state to set up a plan for a distributed payment for medical services, in the form of compulsory health insurance, while leaving the technical details of such services, their standards and quality, in the hands of those most competent to administer this aspect of the relationship, that is the medical profession. There is not even any *necessary* relationship between such a plan for payment and the particular type of organization of such services. Conceivably it would be possible to leave that matter on the present individual basis if desirable.

"To a layman, however, it would appear in the fourth place, that there is no essential reason why group practice cannot provide competent and adequate service as well as can individual private practice. Granting that experience with group practice is not extensive and that results are varied, it still remains true that, when doctors have energetically and intelligently devoted themselves to making such arrangements, the results have frequently been excellent both from the point of view of the patient and of the doctors. . . .

"Another conclusion has to do with the trend of the times with respect to health services. That trend is definitely toward a greater degree of socialization of medical practice both in payment for services and in the organization of services themselves. It is too early to predict what form this socialization will take. The trend itself, however, is strong, not because collectivist reformers are persuasive, but because the facts of need are beginning to be understood. Many thinking people are beginning to realize that medicine, like many another area of individual enterprise, is charged with the public interest to so great an extent that community action will be necessary in order adequately to satisfy that social concern. . . .

"This leads to my final reflection, that a better and sounder plan will result if the doctors of the community instead of opposing this trend, will join with other interested parties to direct the trend and work out the best possible system. They are aware, more than anyone, of the intricacies and requirements of the area of service and relationship to which this community interest is germaine. They occupy a high status in the eyes of citizens because of their valued services at critical junctures in human affairs, and because of their scientific approach to one of the most anxiety filled problems of human experience. Their voices will be heard with respect and confidence if they are obviously coöperating with others to meet a problem of vital community concern. They will destroy that respect and confidence if they encourage the suspicion that they are too concerned with protecting a vested interest of their own, however they may support rationally their position of opposition to this societal adjustment.

"A problem of these proportions cannot be solved by the medical profession alone. It involves a knowledge of social trends and economics which have necessarily had a secondary place in their education. If the solution we arrive at is to be sound, and worked out with the same scientific regard which doctors display for the immediate developments of their practice, they will need to show the same respect for the honest findings of specialists on the social and economic problems involved as the latter must show for the medical profession's findings on the treatment of human illness.

"A partnership of this kind will hold some possibility of a satisfactory development. Without that partnership the result is likely to be a confused and inadequate system of community medical services and payment therefor—satisfactory to no one and least of all to the citizens of the community whose good health is the mutual objective of all concerned."

Professor Bakke has, as he says, "reflected a good deal on the issues involved." It appears that he is rather too modest when he says he has "no solution to this problem to propose or defend." As a matter of fact, he is quite explicit in his views and in what he believes should be done.

Whether or not medical men agree with Professor Bakke's conclusions, it must be admitted that the trends to which he refers are apparent to every thinking physician. If the medical profession is to retain its independent status, this is the time for medical leadership to assert itself.

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Was Osler Right?

Oldsters will remember the furor occasioned by the following statement made by Sir William

Osler: "In that charming novel (The Fixed Period) Anthony Trollope discusses the practical advantages in modern life of a return to ancient usage, and the plot hinges upon the admirable scheme of a college where at the age of sixty men retired for a year of contemplation before a peaceful departure by chloroform." Several years later, Osler still maintained "that the real work is done before the fortieth year and that after the sixtieth year it would be best for the world and best for themselves if men rested from their labors."

Almost half a century has passed since Osler expressed these views. The editor of the *Journal of the Indiana State Medical Association* makes some interesting observations in regard to them. He says:

> "Confining ourselves to the medical profession, we find innumerable instances that controvert this idea; and right here in our own state we have several instances of men of sixty having performed some notable feats in medicine and surgery. An outstanding instance is that 'Grand Old Man of Indiana Medicine,' the late William Niles Wishard, Senior. Had he retired at sixty, urology would have lost many of its notable contributions. As a matter of fact, Doctor Wishard was *at the age of forty just getting ready to do things; he was laying the foundation for his later work!* At fifty he was erecting the superstructure, and at sixty he was just going good. We might cite several other instances of Hoosier medical men who at sixty were doing their best work.
>
> "Stepping over into the American Medical Association, we find Irvin Abell, some past sixty, whose work during the past few years has been of incalculable assistance to the medical profession. Frank Lahey, according to the old Osler standard, should have folded his tent some two years ago, but he carried on and his work in the Procurement and Assignment Service alone has more than justified his 'hanging on.'
>
> "And, had the two Mayos heeded the retirement call, there would today have been no Mayo Foundation. So it is that we still cannot agree with the old Osler dictum. But there can be no doubt that we have too many medical men who at sixty seem to have reached the end of the road. They carry on after a fashion, but in that process they make it clear that they are out of the running—they just cannot keep up the pace.
>
> "We often have wondered why this should be, why some men at sixty—even at fifty—slow up, while others keep going and in the going improve as they go. We never had been able to find the answer until very recently, and we are disposed to give due credit to the man who furnished the answer, Dr. George M. Cook, of Hammond. It seems that a dinner guest one evening asked him why it was that some medical men never 'grew old'—too old to carry on and do things—while others absolutely stopped in the 'fifties.' Without a bit of hesitation he answered, 'Inquisitiveness!' *And that is the answer.* Medical men of sixty continue to carry on, to go places and to do things solely because of inquisitiveness; they want to know why; they want to know why the wheels go around; and, wanting to know, they seek the answer. In other words, so long as the medical man is inquisitive, just that long will he seek the answer, and in that seeking he learns things and tells the medical world about them."

Very interesting! Osler, despite his great genius, was not infallible. Had he lived in our day, he might have felt quite differently about the time when men should rest from their labors. For greater numbers of them in this generation are youthful mentally and are making valuable contributions in their respective fields. On the other hand, youth will be served and it is still true that the majority of innovations must be credited to younger men.

★

Medical Publicity

Much has been written about medical publicity. Comments on the pernicious form which it sometimes takes appears in the October issue of *Northwest Medicine.* Objection is made specifically to an article in a recent number of the *Reader's Digest* by Paul de Kruif announcing "the successful administration of one day's treatment for the cure of syphilis."

It is needless to point out the importance of accuracy in medical news reporting. Washington is particularly fortunate in having among its science writers a layman with an unusual medical background, Mr. Thomas R. Henry, of the *Washington Evening Star.* Mr. Henry's column, "Of Stars, Men and Atoms," reveals the breadth of his scientific knowledge and literary talent to excellent advantage. He has always striven for accuracy and has very seldom been misled by premature reports of new discoveries.

Becoming a good science writer requires many years of experience and extensive knowledge. It also demands a "feel" for science. Mr. Henry has an analytic mind which goes to the bottom of the subject at hand. Furthermore, he has engaged in this field over a period of many years. It is doubted that any layman in this country does a better job in writing on scientific subjects for public consumption.

* * *

Medical Society History Being Brought Up to Date

As older members of the Medical Society of the District of Columbia know, a history of the Society was published several years ago covering the period from 1817 to 1909. Needless to say, its preparation was a tremendous undertaking and if it had not been for the faithfulness of members of the committee and many others who lent a hand, it would not have been completed. Members of the original Committee on History were Drs. D. S. Lamb, C. W. Franzoni, G. Wythe Cook, R. T. Holden and Llewellin Eliot.

A new Committee was created at a meeting of the Executive Board on September 28 to bring the record of the Medical Society up to date. The Board was of the opinion that much valuable material would be lost if the task was not undertaken now. Since the first history appeared, many epochal events have taken place. For example, there are World Wars I and II, in both of which the Medical Society and its members have had a significant role. Then there have been social changes and their effects upon the practice of medicine, and the legal complications involving the Society.

In selecting members of the Committee, the Board endeavored to appoint physicians who not only could devote the time necessary to the task, but who also had personal recollections of many incidents which should be included. The following appointments were made: Dr. John B. Nichols, *Chairman;* Drs. William C. Woodward and William J. Mallory. Completion of the history to date will require months and perhaps years of effort. A tentative outline, prepared by the Chairman, indicates that the volume will prove a very interesting and valuable reference work when it has been completed.

* * *

Third Annual Physicians' Golf Tournament

The day chosen for the Third Annual Physicians' Golf Tournament held at Burning Tree Country Club on October 22 was ideal. The sun shown brightly, it was moderately warm, and fall was in the air. It provided some 33 physicians who participated an opportunity for relaxation from their arduous duties. As was expected, the attendance was not as large as in previous years but there was no lack of enthusiasm. It was a most enjoyable occasion for all those present. As usual, many prizes were awarded. Prize winners were as follows:

Low gross	Dr. Howard L. Smith	76
	Dr. Hayden Kirby-Smith	82
Low net	Dr. George R. Huffman	69
	Dr. Richard Lee Spire	73
High gross	Dr. William C. Sparks	112
	Dr. Charles S. Coakley	105
	Dr. William G. Puryear	100
High net	Dr. William K. Billingsley	87
	Dr. Frank J. Eichenlaub	83
	Dr. Preston A. McLendon	81
Blind bogie	Dr. Jeter C. Bradley	
	Dr. James A. Dusbabek	
	Dr. James M. Moser	
	Dr. H. Ford Anderson	

Prizes were contributed by the following firms:

Marion S. Alley, Coca-Cola Company, H. LaFay Corwin, Continental Baking Company, Dy-Dee Wash, The Gibson Company, The S. H. Hines Company, Hysong's, Kenesaw Drug Store, Kloman Instrument Company, Luzier's, Maxwell & Tennyson, Medical Credit Association, Peoples Drug Stores, Service Pharmacy and John H. Wilkins Company.

A SURVEY OF PRACTICING PHYSICIANS IN WASHINGTON

Antonio Ciocco, M. Allen Pond and Isidore Altman

Division of Public Health Methods, National Institute of Health, U. S. Public Health Service

Source of Data

Statistics on the physicians in private practice in Washington, D. C. have been derived from

1. A card file of the physicians who registered with the District of Columbia Procurement and Assignment Service in May 1942.
2. The most recent list of members of the District of Columbia Medical Society.
3. The list of physicians licensed to practice in the District of Columbia as of August 31, 1942.
4. The lists of hospitals and medical schools on their available and essential personnel, as of July 1942.
5. The latest official lists of District of Columbia physicians in the Army and Navy.
6. The telephone directory for the summer of 1942.
7. The returned questionnaires sent to physicians regarding their practice (see below).

In addition, and in order to verify whether a physician was or was not in practice on September 1, 1942, calls by telephone were made to those physicians younger than 35 years and older than 65 years who had not responded to the questionnaire.

To determine the extent to which the District hospitals are being used by persons residing outside the District of Columbia, a request by letter was made to the 13 general hospitals of Washington, D. C. for information about (a) the total number of admissions in 1940 and 1941, and (b) the admission of residents from Maryland and Virginia in these two years. Two of the hospitals did not have the information tabulated but granted the use of their records for the count.

Also for the purpose of acquiring knowledge about medical care extended to residents outside the District a questionnaire was sent to all physicians presumably in private practice. Sixty per cent of the physicians queried furnished the information desired.

Number of Physicians in Private Practice

At present (September 1, 1942), there are a total of 991 physicians engaged in private practice in Washington, D. C. (cf. table 1). Of these, 79 per cent are white males, 15 per cent negro males, and 6 per cent females. Among all 991 physicians, 45 per cent describe themselves as general practitioners, but among the white male physicians the percentage of general practitioners is only 39. It will be further noted that there are in all 109 white male physicians below 35 years of age, this number being 14 per cent of all the white male practitioners.

Assuming on the basis of recent estimates that the population of Washington, D. C. is now 830,000, it means that there are in practice 12 physicians per 10,000 population. The correction for age, by subtracting two thirds of the physicians above 65 years of age, reduces the total number of physicians to 905, or 10.9 per 10,000 population.

The findings presented in table 1 thus reveal:

1. Females and negro males constitute a substantial proportion of the practicing physicians.
2. General practitioners form an unusually small percentage of the physicians in private practice. This may be due to a tendency on the part of Washington physicians to call themselves specialists, or may be the effect of selection of men for service in the armed forces.
3. There are only 109 white male practitioners under 35 years of age.

The above findings point to the need for a careful reconsideration of policy relative to the further selection of practitioners for the armed services from the District of Columbia. In the first place, if the recruiting is limited to men under 35, the maximum number that could be obtained from Washington is 109. But it is known that among these a certain proportion has already been turned down by the Army for physical and other reasons. Therefore, aside from any question of availability, not more than 50 to 60 more could probably be recruited from this age group. In the second place, the small proportion of general practitioners now remaining makes it advisable to direct future recruiting away from this age group. It is well to realize, though, that any attempt to restrict the military selection to specialists will be rendered difficult by the essentiality of a high proportion of such men to the medical schools and hospitals.

In sum, the data of table 1 bring out that at present the distribution of private practitioners in Washington, D. C. is characterized by relative imbalance with reference to age, race (color), and specialty (cf. addendum).

RATIO OF PHYSICIANS TO POPULATION, AND THE PROBLEM OF THE D. C. QUOTA FOR THE ARMED SERVICES

The observed crude ratio of 12 physicians per 10,000 population, or the corrected-for-age ratio of 10.9 physicians per 10,000 population, places the District of Columbia above the national average and above the ratio for most of the states. Compared to any of the 48 states the District of Columbia still possesses a large number of physicians in relation to population. However, there is no justification for any such comparison. Notwithstanding its legal status, the District of Columbia is but a city, and without appropriate allowance for the fact should not be included among the states when the state quotas are being calculated. The reason is obvious. A state comprises at least one urban center which is also a medical center with hospitals and medical schools and which contains a dense concentration of physicians. The remainder of the state, the less urbanized sections with a sparse number of physicians, depends to a greater or less degree on these urban centers for medical care. At the same time, relative paucity of physicians in the rural sections of the state lower the ratio of physicians to population for the state as a whole.

TABLE 1

Age and Specialty of Physicians in Private Practice in Washington, D. C., September 1, 1942

TYPE OF PRACTICE	GRAND TOTAL	WHITE MALES					NEGRO MALES			FEMALES
		All	Under 35	35–44	45–64	65 & over	All	Under 45	45 & over	
General practitioner	448	308	56	97	96	59	106	42	64	34
Specialists:										
Internal medicine	106	100	13	40	39	8	5	2	3	1
Surgery	84	76	9	28	31	8	8	3	5	—
Gynecology & obstetrics	77	66	12	30	20	4	5	3	2	6
Pediatrics	48	40	8	17	14	1	3	2	1	5
Otorhinolaryngology	48	43	—	12	28	3	3	1	2	2
Eye-Ear-Nose-Throat	10	10	1	4	3	2	—	—	—	—
Ophthalmology	36	30	1	14	9	6	5	1	4	1
Neurology & psychiatry	32	22	3	5	13	1	5	3	2	5
Radiology	16	15	2	3	10	—	1	1	—	—
Urology & proctology	26	23	1	10	10	2	3	2	1	—
Orthopedics	15	13	1	7	4	1	2	1	1	—
Dermatology & syphilology	16	13	1	5	5	2	2	2	—	1
Industrial medicine & surgery	3	3	—	3	—	—	—	—	—	—
Clinical pathology	8	7	1	—	6	—	1	—	1	—
Anesthesiology	18	17	—	7	8	2	—	—	—	1
Total specialists	543	478	53	185	200	40	43	21	22	22
All practitioners	991	786	109	282	296	99	149	63	86	56

The District of Columbia does not contain within its boundaries the rural elements of a state. Yet Washington, D. C. functions as a medical center for surrounding areas of Maryland and Virginia in the same fashion that, for example, Baltimore City functions for the central, southern and eastern parts of Maryland. From the reports of the 13 general hospitals questioned it is found that, during 1941, 12,079 Maryland and 7,938 Virginia residents were admitted as patients. The total of 20,007 admissions is 25 per cent of all the admissions to these hospitals during the year. In addition, 3,359 persons residing elsewhere outside the District were admitted to these hospitals during the same year.

The extent of medical care given by the Washington physicians to "out-of-the-District" residents may also be measured by the information obtained from the physicians regarding the number of patients seen by them in one week's time. From the questionnaires returned by 291 white male practitioners who examined a total 29,474 patients during the week of August 30 to September 5, the proportion of patients residing outside the District is found equal to 15 per cent.

From the figures it can be estimated that Washington provides hospitalization for a population of approximately 300,000 persons residing in Maryland and Virginia, and for an additional 55,000 living elsewhere outside the District. This estimate can be reached in two ways. If it is assumed that 6 per cent of a population is hospitalized each year, then 20,007 and 3,359 admissions for 1941 would result from a population, respectively, of 333,000 (20,007/.06) and 56,000 (3,359/.06). On the other hand, it can be reasoned that if the population of Washington of 830,000 has led to 70 per cent of the hospital admissions, then 25 per cent would come from a population of 296,000 from Virginia and Maryland, and the remaining 5 per cent from a population of 59,600 residing elsewhere.

Care of hospitalized patients occupies a minor portion of the physician's time. So it would not be correct to assume that the physicians of the District serve a population of 830,000 plus 355,000 persons. A closer approximation to the real situation is obtained from the number of patients residing outside the District seen by Washington physicians. The sample surveyed would indicate that 15 per cent of the patients belong to that category. On the basis of this percentage it could be estimated that the total population served by Washington physicians equals 975,000 ([830,000/100 − 15] × 100).

Using this population estimate as a base, the crude ratio of physicians to population becomes 10.1 per 10,000, and the ratio corrected for age equals 9.3 per 10,000. A clearer understanding of the meaning of these values is acquired by comparison to those found for Baltimore City which, on the whole, has the same characteristics of Washington, D. C. relative to hospitals, medical schools, etc.

As of June 1, 1942, the crude ratio of physicians to population in Baltimore City equalled 13.4, the ratio corrected for age was 12.2, and that corrected for age and flow of patients from the rest of Maryland equalled 11.8. The equivalent ratios for Washington, D. C. are 12.0, 10.9 and 9.3. Thus the Washington ratios are all lower, but part of the difference may be attributed to the three months that have elapsed between the two series of observations. At the time of the Baltimore survey, a careful examination of the medical needs of the city and counties in relation to existing conditions was made by the State Chairman of the Maryland Procurement and Assignment Service. His conclusions were that, all things remaining equal, no great impairment of medical care to the city population would occur so long as there remained in Baltimore enough practicing physicians to give a crude ratio of 9.2 physicians per 10,000, or a ratio corrected for age equal to 8.2. The comparable ratios for Washington being 10.1 and 9.3, respectively, it seems safe to conclude that the reduction of private practitioners in the latter city has not yet reached a critical level.

These data, therefore, do not warrant the assertion that there is an acute shortage of private practitioners at present in Washington, D. C. But the situation is far from comfortable as the withdrawal of physicians continues, and particularly since the population of the District of Columbia and surrounding areas will probably go on expanding at the present high rate. In establishing quotas for the future needs of the armed forces, serious consideration must be given to the abrupt changes in size of population.

SUMMARY AND CONCLUSIONS

The findings do not indicate that at present there is an acute shortage of physicians in active private practice in the District of Columbia. However, it appears that the number of effective physicians is rapidly approaching the lowest safe limit, and that if further and indiscriminate inroads are made on the remaining supply of private practitioners, the effects of their withdrawal will be felt. Since Washington may be regarded as a center of a medical trade area, any shortage of physicians in the District will be manifest in the development of serious medical care problems not only within the city limits but also throughout the entire Metropolitan Area, comprising counties of Maryland and Virginia There is at present a distortion in the distribution of physicians in terms of age, specialty and race.

Further withdrawal of young practitioners will tend to increase the distortion. Hence, it is important that steps be taken promptly to insure the most efficient use of the remaining private medical facilities in the community.

Several measures could be suggested and the choice of the more appropriate ones should be made after a careful evaluation of all the characteristics of the local situation. Thus, the high proportion of specialists in the community raises the question of whether some of them could not be influenced to engage in general practice.

To be effective, all measures decided upon should be directed toward increasing the number of patients that can be seen by an individual physician in a given unit of time, and to equalize among all physicians the extra burden arising from the present emergency. These ends could probably be achieved to some degree by the creation of the kinds of clinics now believed to be under discussion in the District of Columbia Medical Society. Another type of organization which alone or together with such clinics could be expected to achieve the purposes mentioned is the expansion of the Medical Service Bureau of the District Medical Society so that it would serve as a directing and integrating center for the distribution of medical care.

In closing, it should be emphasized that the dynamic and changing character of the present situation requires a continuous check on the number of physicians present at any given moment and on their status. It is, therefore, essential that the current file of physicians should always be maintained accurately posted.

ADDENDUM

Certain comparisons with Baltimore City data.

A comparison between Washington, D. C. (September 1, 1942) and Baltimore City (June 1, 1942) with regard to sex and race of physicians reveals:

a. Washington, D. C. has a higher proportion of female physicians in private practice than Baltimore City. In Washington 5.65 per cent of the physicians are women while in Baltimore the percentage equals 3.27.

b. Among all physicians in private practice, the negroes constitute 15.04 per cent in Washington and only 5.44 per cent in Baltimore City.

The age distributions of the white male physicians in private practice in the two cities are indicated by the following tabulation:

AGE	PER CENT WHITE MALE PHYSICIANS	
	Washington, D. C., September 1, 1942	Baltimore, Md., June 1, 1942
Under 35	13.8	17.9
35–44	35.9	24.6
45–64	37.7	43.7
65 and over	12.6	13.8
Total	100.0	100.0
Number of physicians	786	1091

The main differences between the two cities is that in Washington there are fewer physicians under 35 and from 45 to 64 years of age and more in the age group 35–44 than in Baltimore City.

The most striking difference between the two cities is in relation to specialty. Among the white male physicians of Washington, 39 per cent are general practitioners. In contrast, one finds that in Baltimore the general practitioners represent 52 per cent of the white male physicians.

Taken together, the figures presented here reveal that compared to Baltimore City—which, relative to size, hospitals and medical schools, is on the whole similar—Washington has proportionately more female and negro physicians and fewer general practitioners and fewer men under 35 years of age. Whether these differences existed before or are the results of the selection of men for the armed services cannot be determined without other data.

War Section

DRUGS IN WARTIME

S. F. Higger

President, District of Columbia Pharmaceutical Association

Believing that Government regulations relating to drugs are of particular interest to physicians, the District of Columbia Pharmaceutical Association has agreed to prepare resumés of them for monthly publication in the Medical Annals. Many of the items below have already been brought to the attention of physicians through various media. It is hoped that this summary may be of value to the members of the Medical Society of the District of Columbia.

Quinine, Cinchonidine, Cinchonine, and Quinidine and their salts by WPB Conservation Order No. 131 are restricted to the prevention and treatment of malaria and, in the case of quinidine and salts, allowance is made for use in the treatment of cardiac disorders.

Totaquine, an extract of cinchona containing approximately 70 per cent of a mixture of quinine, cinchonidine, cinchonine, and quinidine, and which is now official in the new U.S.P. XII, is also prohibited for other uses than those above.

This conservation order has brought about the following changes in popular National Formulary preparations:

Elixir Glycerophosphates Compound: quinine hydrochloride omitted.

Elixir Iron, Quinine, Strychnine: new Elixir of Iron and Strychnine.

Elixir Iron, Quinine, Strychnine Phosphates: new Elixir of Iron and Strychnine Phosphates.

Syrup Hypophosphites Compound: quinine omitted.

Elixir Cinchona Alkaloids (Calisaya): deleted for duration.

Pills Iron, Quinine, Strychnine with Arsenic: deleted for duration.

Combinations and formulas containing any of the cinchona alkaloids manufactured prior to April 30, 1942 may be used for non-malarial or non-cardiac purposes until their supply is exhausted.

Prescriptions containing quinine, cinchonidine, cinchonine, quinidine or their salts cannot be filled or refilled unless prescribed for malaria or cardiac disorders.

Tannic acid (nutgalls), WPB on August 8, 1942 limited the use of tannic acid U.S.P. to the treatment of burns, manufacture of products used exclusively for the treatment of burns, laboratory use as an analytical reagent, and extemporaneous compounding of physicians' prescriptions. Prescribing of tannic acid by the physician is not affected, although conservation is necessary.

Orange Flower Water, by order of N. F. Interim Revision Committee, may be replaced by water.

Oil of Lavender in tincture of green soap is replaced by oil of cedar leaf.

Aromatic Spirits of Ammonia—oil of lavender may be omitted.

Oil of Sweet Almond—replaced by oil of persic, a heavy fixed oil of similar nature expressed from peach and apricot kernels.

Oil of Bitter Almond—replaced by benzaldehyde in N. F. preparations.

Belladonna—in certain formulas belladonna may be replaced by stramonium in the ratio of 10 parts of stramonium to 8 parts of belladonna.

Narcotics, Theobromine, Caffeine—supplies narrowing. At present conservation is along the lines of using as little as possible. Physicians are requested to prescribe minimum requirements for their patients.

Because of the progress which has been made in chemical research and industry in the United States since the last war, we are generally in fortunate position with respect to chemicals and synthetic drugs.

Depletions and shortages in view of the tremendous need are to be expected. Imports, i.e., oils, botanicals and gums are rather scarce. In some cases satisfactory substitutes are being developed and will soon be available. Many botanicals are now being grown here that were formerly imported and should be available for use in another year. With so much that is encouraging in this picture, we should do all we can to protect the supply of those few which are not now replaceable.

OUR PHYSICIANS ON THE MILITARY FRONT

Tribute is being paid in military dispatches to the courage and efficiency of Comdr. Don S. Knowlton of the Navy Medical Corps, who is with the Marines in the Solomon Islands. According to reports from the Tulagi fighting area, Commander Knowlton is operating a field hospital which he established under fire.

Lt. Col. Morris Chase has been named Chief of Medical Service at Camp Lee, Virginia, where he has been stationed since April 1941. In World War I Lieutenant Colonel Chase served with the infantry in the 41st Division.

The following thirty-two members have been reported in service since September 1942: Henry L. Bastien, William E. Bageant, Montgomery Blair, Jr., Morris I. Bierman, William W. Chase, Linn F. Cooper, Karl C. Corley, Robert H. Detwiler, Harold R. Downey, John F. Finnegan, Aaron H. Gerber, John E. Hanby, Stafford W. Hawken, Eugene W. Higgins, Saul Holtzman, Henry L. Kulesher, Henry M. Lowden, Clarence L. Miller, John Minor, Edward W. Nicklas, George W. Russell, Clyde P. Reeves, George W. Reeves, Alfred H. Richwine, William A. Ryon, Leo V. Schneider, Leon Seley, Hyman D. Shapiro, Daniel Sondheimer, Albert J. Sullivan, T. Frasier Williams and Alfred Wilson.

A number of Washington physicians in the armed forces have won recognition in recent months. It is reported that the following Society members have been advanced in rank:

George L. Ball, from Captain to Major
Daniel L. Borden, from Lieutenant Colonel to Colonel
Morris Chase, from Major to Lieutenant Colonel
A. Clagett Gray, from Lieutenant Colonel to Colonel
Luther W. Gray, from Captain to Major
Henry S. Gwynn, from Captain to Major
Malcolm D. Harrison, from Captain to Major
Howard Katzman, from Captain to Major
Edward A. Krause, from Major to Lieutenant Colonel
George V. Martin, Jr., from Captain to Major
Philip A. E. Stebbing, from First Lieutenant to Captain.

PSYCHIATRISTS DISAGREE

There was much ado recently among psychiatrists over the probable mental effects of military service on 18 and 19-year-old boys. Dr. Thomas V. Moore, Professor of Psychiatry at Catholic University, and Dr. Nolan D. C. Lewis, former Clinical Director of St. Elizabeths Hospital, declared, according to the press, that the effects might be devastating. Thereupon Dr. C. Charles Burlingame of the Neuropsychiatric Institute of Hartford, issued the following statement on behalf of ten of the leading psychiatrists in the country:

> "So much has been said and so much implied about the desirability of drafting 18 and 19-year-old men for military service from the viewpoint of emotional stability that it seems that in the public interests that a simple, direct statement should be made on this question.
>
> "Speaking as individuals we wish to assure the public and parents of this age group that there are no grounds for apprehension as to the effect of military service on these younger men as distinguished from the older men. Such statistics as are available indicate that the incidence of mental breakdowns is no greater in the 18 and 19-year age group than in the older group. If anything it is somewhat less. It would seem to us that the proposal now before the American Congress does not unduly compromise the future mental integrity of this particular age group or of the nation. With the government realizing and properly assuming this increased responsibility, we endorse favorable action upon the proposal to include men of 18 and 19 years under the Selective Service Act."

This statement was signed by Dr. Adolf Meyer, Professor Emeritus of Psychiatry, Johns Hopkins University; Dr. C. Macfie Campbell, Professor of Psychiatry, Harvard University; Dr. Foster Kennedy, Professor of Neurology, Cornell University; Dr. C. Charles Burlingame, Psychiatrist-in-chief, Neuro-Psychiatric Institute, Hartford; Dr. Edwin G. Zabriskie, Professor of Clinical Neurology, Columbia University; Dr. Winfred Overholser, Superintendent, St. Elizabeths Hospital, Washington; Dr. S. Bernard Wortis, Professor of Psychiatry, New York University; Dr. Tracy Putnam, Professor of Neurology, Columbia University, and Dr. Oscar Diethelm, Professor of Psychiatry, Cornell University.

WOMAN'S AUXILIARY NOTES

The Woman's Auxiliary to the Medical Society of the District of Columbia held its first meeting of the season on October 14 in the library of the Society's Building, 1718 M Street. Mrs. George Richards, the guest speaker, gave a talk on "Home Nursing," suggesting that one out of every family take the course. She also stated that schools and colleges are making it compulsory to take the Home Nursing Course.

Mrs. W. J. B. Orr, delegate to the American Medical Association Convention in June, gave her report at this meeting. Mrs. Theodore Wiprud was elected Honorary Member of the Auxiliary. A number of members remained after the meeting to make surgical gowns and children's dresses.

The Home Nursing Course for doctors' wives began on Tuesday, October 20, at the Walsh House. It is a 24-hour course, lasting for a period of six weeks, with classes in session from 10 to 12 a.m. Among the members of the Auxiliary who registered for the course were Mrs. A. Magruder MacDonald, Mrs. Charles H. McEnerney, Mrs. William C. Stirling and Mrs. Jesse T. Mann.

Doctors' wives who are graduate nurses are urged to take the Red Cross Refresher Course, which will enable them to teach. The Refresher Course will be conducted by Mrs. Thompson of the Red Cross.

In response to the Red Cross plea for "Bundles for America," members have been asked to bring discarded wearing apparel to each meeting. Members are also requested to donate their blood to the Plasma Bank at 23rd and C Streets, N.W. Telephone Republic 8300, Extension 212, for an appointment.

Mrs. Tomas Cajigas
Publicity Chairman

MEETINGS

Wednesday, December 9

Program Commemorating the 125th Anniversary of the Medical Society of the District of Columbia

1. Music by George Washington University Glee Club. Robert H. Harmon, M.D., Director
2. Introductory Remarks. A. Magruder MacDonald, M.D., President, The Medical Society of the District of Columbia
3. Introduction of Guests
4. "Medicine in the Nation's Capital, 1817–42." Arthur C. Christie, M.D., F.A.C.P., Past President, The Medical Society of the District of Columbia
5. "American Medicine's Contribution to the Nation." Frank H. Lahey, M.D., F.A.C.S., Past President, American Medical Association; Chairman, Board of Directors, Procurement and Assignment Service
6. The National Anthem

Buffet Supper

Wednesday, December 16

Third Session of Course for Physicians on the Medical Aspects of Chemical Warfare

1. "Pathology, Symptomatology, Differential Diagnosis and Treatment of Pulmonary Lesions Induced by Vesicant Agents." Philip A. Caulfield, M.D., F.A.C.S., Professor of Surgical Anatomy, Georgetown University School of Medicine
2. "The Eye Lesions Induced by Chemical Warfare Agents." James N. Greear, M.D., F.A.C.S., Ophthalmologist, Emergency and Episcopal Eye, Ear and Throat Hospitals

Questions and Discussion

MEMBERSHIP

The following applicants for membership were duly elected to membership at the business meeting, November 4, 1942:

Active Member

William M. Clopton, 3929 Oliver Street, Chevy Chase, Md.

Associate Member

Edna F. Patterson, 45 Carroll Avenue, Takoma Park, Md.

The following applicants for membership will be voted on at the business session, January 13, 1943:

For Active Membership

Ruth B. Benedict, New York University College of Medicine—1939

Andrew J. Betz, Georgetown University—1929

Thaddeus George Fibich, Georgetown University—1934
Harry Friedenburg, George Washington University—1925
Aaron Harry Gerber, George Washington University—1934
Florence E. Grady, George Washington University—1939
Dorothy S. Jaeger, George Washington University—1939
Paula R. Kaiser, University of St. Andrews, Scotland—1936
Sydney Leventhal, George Washington University—1938
Morris Harold Levine, University of Toronto, Canada—1935
Lawrence B. McCaleb, Georgetown University—1934
George Maksim, Temple University—1933
Wilkins R. Manning, George Washington University—1938
Francis S. Richardson, George Washington University—1933
Robert Lee Simpson, Georgetown University—1938
Miguel Steinberg, University of Zurich, Switzerland—1917
John Joseph Sweeney, Georgetown University—1939
Roy Anson Thornley, Georgetown University—1914
Richard Henry Todd, Johns Hopkins University—1933
Albert Sidney Winer, University of Maryland—1938
William C. Woodward, Georgetown University—1889

For Associate Membership

Laura N. Baernstein, University of Wisconsin—1939
Marion S. Brown, College of Medical Evangelists—1942
Paul D. Cantor, Georgetown University—1940
John F. Donohue, Marquette University—1940
Richard E. Kelso, George Washington University—1939
Isidor M. Lavine, George Washington University—1941
Irving Lowell Marks, University of Maryland—1939
Ralph B. Miller, University of Pennsylvania—1930
Thomas D. Noble, University of Toronto—1927
Russell C. Payne, George Washington University—1937

Recent changes in membership status:

Active to Associate

Max E. Feldman

Resigned

Associate Members

George M. Leiby
Jay L. Hoffman
Virginia E. Lane

NEWS AND PERSONALS

The Annual Clinical Congress of the American College of Surgeons, scheduled to convene in Cleveland, November 17 to 20, has been cancelled.

The convention of the **Southern Medical Association**, held in Richmond, November 10 to 12, was well attended by Washington physicians. Dr. James E. Paullin of Atlanta, Ga., President of the American College of Physicians and President-elect of the American Medical Association, addressed a special luncheon meeting November 11, attended by officers of state medical associations.

Graduates of Columbian and George Washington University met during the convention for a get-together dinner at the Richmond Hotel, November 11. Dr. Alexander W. Weddell, former Ambassador to the Argentine Republic and first American Ambassador to the Franco régime in Spain, spoke on "The Argentine Republic." Dr. William Earl Clark, President of the George Washington University Medical Society, presided.

The Tenth Series of the **Thomas William Salmon Lectures** is being given this year by Dr. Emilio Mira, November 6, 13 and 20, at the New York Academy of Medicine. He has chosen for his subject, "Psychiatry at War." Dr. Mira was formerly Professor of Medicine, Philosophy and Economic and Social Sciences at the University of Barcelona, Spain, and Director of the Neuro-Psychiatric Services of the Loyalist Forces in Spain during the Spanish Civil War from 1936 to 1939.

The Third Annual Medical Meeting of the National Foundation for Infantile Paralysis will be held in New York City, December 3 and 4.

The Section on Neurology and Psychiatry has elected the following officers to serve during the coming year:

Dr. Albert E. Marland, *Chairman;* Dr. Z. M. Lebensohn, *Vice Chairman;* Dr. Robert H. Groh, *Secretary-Treasurer.*

The Washington-Baltimore Psychoanalytic Society will meet in the library of the Medical Society's Building, December 12, at which time Drs. Lewis B. Hill and Agnes B. Greig will present a paper on "Defense Mechanisms in the Adult and the Adolescent."

At the first meeting of the year, October 10, Dr. Harry Stack Sullivan gave a talk on "Possibilities of Brief Psychotherapy."

Members of the **Washington Academy of Surgery**, at their meeting October 9, listened to a lecture on "Surgery of the Intervertebral Disc" by Major Glenn R. Spurling, who is on active duty at Walter Reed Hospital.

The Clinico-Pathological Society has held two meetings this fall. Dr. William H. Jenkins was host at a dinner meeting, October 20, at the Chevy Chase Club. New officers were elected, and case reports were presented as follows: "Sarcoma of the Testicle," Dr. Homer G. Fuller; "Intraocular Hemorrhage Associated with Rupture of Aneurysm of the Circle of Willis," Dr. James N. Greear.

Dr. J. W. Lindsay was host to the Society on November 3. Case reports on "Blindness Due to Improper Use of Tryparsamide," "Ulcer of the Bladder," and "Carcinoma of the Fundus of the Uterus" were presented by Drs. William H. Hough, Charles P. Howze and Henry L. Darner, respectively.

The Washington Society of Pathologists presented the following program, November 7: "Tumor of the Breast," Dr. Thomas M. Peery; "Tumor of the Lung," Dr. Tomas Cajigas; "Tumors following Cirrhosis of the Liver in Chronic Sellenosis in Rats," Dr. Arthur A. Nelson.

The District Society for the Prevention of Blindness held its annual meeting at the Y.W.C.A., October 20. Dr. Ella L. Oppenheimer, Director of the Bureau of Maternal and Child Welfare of the Public Health Service, was elected President, succeeding Dr. James N. Greear, who presided at the meeting. Dr. William Thornwall Davis gave an address on "The Place of the Community Organization for the Prevention of Blindness in Time of War."

Dr. William S. Anderson was chosen Corresponding Secretary of the Society, and Dr. Walter A. Rath was elected to fill an unexpired term of a member of the Board of Directors.

The American Red Cross is sponsoring a **Red Cross National Photo Awards Competition** which is of particular interest to the medical profession and to all persons identified with it. The contest is designed to provide a pictorial story of the organization's wartime work at home and abroad. All entries must portray an activity of the American Red Cross or be symbolic of the spirit of the American Red Cross.

Pictures may be made on any type of film, but not on glass-plate negatives. No prints more than 10 inches in the longest dimension may be entered, and prints no smaller than 5 by 7 inches are preferred. On the back of each entry should be printed the name and address of the competitor and a brief title or description of the picture. Men in the military or naval services may submit negatives with their prints; others should retain the negatives, to be turned over to the contest director if requested. The entries should be mailed flat and unmounted to Red Cross National Photo Headquarters, 598 Madison Ave., New York.

Awards will be made in war savings bonds, the prizes announced representing maturity values. Monthly awards during the contest will consist of first prize $200, second prize $100, third prize $50, and 33 special merit awards of $25. Grand awards will be as follows: first prize $500, second prize $300, third prize $200, fourth prize $100, and 10 honorable mention prizes of $50. Closing date for entries is December 31. Grand prize winners will be announced about February 1, 1943.

Casualty Hospital received a portable artificial respirator from the Central Labor Union, October 20.

Colonel Daniel Borden, who was elected a member of the Executive Board following his retirement as President in 1941, addressed a letter to the Chairman of the Board, September 9, stating that "the exigencies of war make it necessary for me to tender my resignation as a member of the Executive Board." The Society, at its meeting November 4, in accord with the recommendation of the Executive Board, voted to accept his resignation and to convey to him the Society's appreciation of his services.

Dr. Borden was recently appointed Commanding Officer of Station Hospital, Fort Eustis, Virginia, with the rank of Colonel. As Lieutenant Colonel he had previously served as Chief of the Surgical Service, Station Hospital, Fort Meade, Md.

Dr. William P. Herbst was elected a member of the Executive Board to succeed Dr. Borden.

Dr. Fred R. Sanderson has been appointed Professor and Director of the Surgery Department of Georgetown University School of Medicine and Chief Surgeon of Georgetown University Hospital, succeeding Dr. James A. Cahill, who died recently.

Dr. Sanderson has been a member of the medical faculty since 1923.

James G. Capossela, Assistant Superintendent of Emergency Hospital since March 1938, has been appointed Superintendent to succeed B. Brent Sandidge, deceased. Mr. Capossela, a native of Brooklyn, New York, served as Credit Manager for Health Security Administration before becoming associated with Emergency Hospital.

Dr. V. L. Ellicott, Health Officer of Montgomery County, Md., entertained about 35 members of the **Syphilis Journal Club,** October 9, at his home in Bethesda. Speakers were Dr. William Welsh, Dr. Elizabeth Seech and Assistant Health Officer Leon Salzman of Montgomery County.

Dr. Claude Moore has been appointed Counsellor for the District of Columbia by the Board of Governors of the American College of Radiology.

Dr. S. L. Hilton was elected President of the West End Citizens' Association, October 12.

Commander Eric Liljencrantz, M.C., U.S.N.R., of the Research Division of the Bureau of Medicine and Surgery, was killed in a plane crash at Pensacola, Florida, November 5. Comdr. Liljencrantz met his death on the eve of his fortieth birthday while making a medical research flight over the Pensacola Naval Air Station. He recently addressed the Society's Fourteenth Annual Scientific Assembly. Surviving are his wife, Mrs Thais Liljencrantz, and a daughter, Francora, both residing at their home, 3020 Tilden Street, N.W.

CIBA Pharmaceutical Products, Inc., of Summit, N. J., has presented to the Army and Navy portraits of six early surgeons general of the Army and Navy. The portraits are of William Paul Crillon Barton, the first Chief of the Bureau of Medicine and Surgery of the Navy, 1786–1856; Jonathan M. Foltz, Chief of the Bureau of Medicine and Surgery and Surgeon General, U. S. Navy, 1810–1877; Elisha Kent Kane, Medical Officer of the U. S. Navy, 1820–1857; Charles S. Tripler, Brigadier General, Army Medical Corps, 1806–1866; Jonathan Letterman, Surgeon Major, U. S. Army, 1824–1872; Bernard J. D. Irwin, Brigadier General, Army Medical Corps, 1830–1917.

These men form a body of scientific pioneers who helped to establish the medical services of the Army and Navy and make them the great implement for the saving of life they are today.

General Jacques Bradbeck, Executive Vice President and General Manager of CIBA Pharmaceutical Products, Inc., presented the gifts. Portraits of the Navy heroes were accepted by Rear Admiral Charles M. Oman, M.D., U. S. Navy, at the new Naval Medical Center, Bethesda, Md., where the portraits will be hung in the library. Col. Harold W. Jones, Medical Corps, U. S. Army, received the portraits in behalf of the Surgeon General of the Army.

BOOKS RECEIVED FOR REVIEW

Acknowledgment is made of the following books which have recently been received for review:

Constitution and Disease. Julius Bauer, M.D., Professor of Clinical Medicine, College of Medical Evangelists, Los Angeles, Calif.; formerly Professor of Medicine, University of Vienna. Pp. 208. Price, cloth, $3.50. New York: Grune & Stratton, 1942.

Medical Parasitology. James T. Culbertson, Assistant Professor of Bacteriology, College of Physicians and Surgeons, Columbia University. Pp. 285. Price, cloth, $4.25. New York: Columbia, 1942.

Clinical Anesthesia. John S. Lundy, B.A., M.D., Head of Section on Anesthesia, Mayo Clinic; Professor of Anesthesia, Mayo Foundation for Medical Education and Research, Graduate School, University of Minnesota; Diplomate and Member of the American Board of Anesthesiology, Inc., Member of the Subcommittee on Anesthesia, National Research Council. Pp. 771 with 266 illustrations. Price, cloth, $9.00. Philadelphia: Saunders, 1942.

Manual of Dermatology. Military Medical Manuals. Donald M. Pillsbury, M.D., Marion B. Sulzberger, M.D., and Clarence S. Livingood, M.D. Issued under the Auspices of the Committee on Medicine of the Division of Medical Sciences of the National Research Council. Pp. 421 with 109 illustrations. Price, cloth, $2.00. Philadelphia: Saunders, 1942.

Ophthalmology and Otolaryngology. Military Surgical Manuals II. National Research Council. Pp. 331. Philadelphia: Saunders, 1942

Abdominal and Genito-Urinary Injuries. Military Surgical Manuals III. National Research Council. Pp. 243. Philadelphia: Saunders, 1942.

Pharmacopoeia of the United States, 12th revision. Prepared by the Committee on Revision and published by the Board of Trustees. Pp. 880. Easton, Pa: Mack, 1942.

Studies from the School of Medicine, The George Washington University, for 1941–42. Washington, D. C.

Thoughts of a Psychiatrist on the War and After. William A. White, M.D., Superintendent of St. Elizabeth's Hospital, Washington, D. C.; Professor of Nervous and Mental Diseases, Georgetown University; Professor of Nervous and Mental Diseases, George Washington University. Pp. 28. Price, cloth, $1.50. New York: Hoeber, 1919; reprinted by William Alanson White Psychiatric Foundation, Washington, D. C., 1942.

BOOK REVIEW

The Management of Fractures, Dislocations, and Sprains, 3rd. ed. John Albert Key, B.S., M.D., Clinical Professor of Orthopedic Surgery, Washington University School of Medicine, St. Louis; Associate Surgeon, Barnes, Children's and Jewish Hospitals; and H. Earle Conwell, M.D., F.A.C.S., Birmingham, Ala., Orthopedic Surgeon to Tennessee Coal, Iron and Railroad Company and the Orthopedic and Traumatic Services of Employees' Hospital and to the American Cast Iron Pipe Company; Chairman, Committee on Fractures and Traumatic Surgery of American Academy of Orthopedic Surgeons; Member, Fracture Committee of American College of Surgeons; Associate Surgical Director of Crippled Children's Hospital; Attending Orthopedic Surgeon, St. Vincent's, South Highlands, Hillman, Children's, Baptist and Jefferson Hospitals. Pp. 1,303. Price, cloth, $12.50. St. Louis: Mosby, 1942.

This new edition by Key and Conwell offers the student, intern, practitioner and surgeon an excellent complete modern text. There have been numerous revisions and additions. A brief summary of these is as follows: (1) the use of a hospital bed instead of a Bradford frame for hyperextension in fractures of the vertebrae, (2) a new section on "Lesions of Intervertebral Discs and of the Ligamentum Florum," (3) the hanging arm casts for fractures of the shaft of the humerus or open reduction methods, (4) the more frequent application of operative internal fixation with nails, pins and screws for intracapsular fractures of the hip, (5) the "Shanz" osteotomy and Smith-Peterson nail for the treatment of nonunion of fractures of the femoral neck where the head is viable, (6) operative methods with screws and nails for trochanteric fractures in preference to immobilization methods, (7) "Yoerg's" manipulative methods for fractures of the os calcis, and (8) a thorough description of the treatment of compound fractures and war wounds. The writers advise early, thorough débridement, adequate early treatment of shock with plasma, blood and crystalloid solutions, and the early local and parenteral use of sulfones. This section is indeed timely and instructive.

The high standards of writing, printing and illustration which were notable in previous editions of this text have been maintained in this, the third edition.

Jacob J. Weinstein, M.D.

ROBERT FRENCH MASON, M.D.

(1869–1942)

Dr. Robert French Mason, Associate Member of the Medical Society of the District of Columbia, died October 29, 1942, at his home, 2415 California Street, N.W., following a long illness.

Dr. Mason was born in Prince William County, Virginia, in 1869, and spent his boyhood in Charlottesville. He received his degree in medicine from the University of Maryland Medical School in Baltimore in 1895. The following year he began practicing medicine in the District of Columbia, where he resided for almost fifty years.

Dr. Mason was elected to membership in the Medical Association of the District of Columbia in 1896, and to Active Membership in the Society, 1897, retaining the latter membership until 1932, when he retired from active practice in the District. At that time he transferred his membership to Associate.

Surviving are two sons, Robert French Mason III and Melville Fuller Mason, and three grandchildren, all of Washington.

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HEALTH OF THE CIVILIAN POPULATION DURING WAR—THE NATIONAL PROBLEM*

JOSEPH W. MOUNTIN, M.D.
Assistant Surgeon General, States Relations Division, United States Public Health Service

BEFORE discussing health and medical implications of the current national emergency I should like to sketch in very broad outlines some of the changes now occurring which are certain to influence our lives and shape our course of action.

While the exact size of the armed forces has not been disclosed, it is fair to assume that the number of men under arms will soon reach 5 million. We are informed by various sources that a total strength of from 10 to 13 million men ultimately may be reached. Different estimates are reported of workers that will be needed on the home front to equip and supply the combat forces, but perhaps the exact number is not known.

In any event, the manpower problem is serious. Not only are the men who enter military service taken out of production, but they are engaged in an enterprise which calls for expenditure, without replacement, of vast quantities of goods and materials. Already many articles formerly regarded as necessities are not obtainable for civilian use. The list of such articles is certain to grow, and it will include many items needed for basic health and medical services.

With the most vigorous members of our population going off to war, their places in industry are being taken by others who are less fit physically. Women, boys and girls, old people, and the physically handicapped will occupy a role of increasing importance in production as the war continues.

To complicate matters further, there has been a vast migration and dislocation of population. Millions of people have left their former homes and gone to work in war areas. In most of these places existing health and sanitation facilities have been severely overstrained, and in some of them living conditions for a majority of the newcomers can be described only as primitive. The restriction of automobile transportation has added to the congestion and interfered with efforts to remedy it.

While these circumstances have increased the need for health and medical services, resources for providing such services have diminished. Physicians, dentists, nurses and engineers have been withdrawn from civilian practice for duty with the armed forces. Health department staffs and the ranks of private physicians have been seriously depleted in many localities. Yet, in the 300 or more so-called boom areas, the effective demand for medical care has risen sharply. People have more money but there are fewer things they can buy. Therefore, they spend the money for services instead.

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* Read before the Society, October 14, 1942.

In contrast to the 300 or more areas to which the war has brought sudden prosperity, a much larger number of communities have been adversely affected. These "areas of negative pressure" are actually undergoing an economic depression. For many of them this may be said to represent only an exacerbation of a more or less chronic condition. Lack of professional opportunity in these localities long ago reduced the physician-population ratio below a desirable level. And now physicians in these areas are entering military service at a faster rate than their colleagues from prosperous communities where the physician-population ratio is more satisfactory.

How will all of these contradictory circumstances affect the health of the Nation?

From time to time we read statements by recognized authorities to the effect that the health of our people was never so good as it is today. Reports from England give the same impression about conditions there, even after three years of war. You will recall similar statements made with regard to the effects on health of the last depression.

These commentators would apparently have us believe that disasters of one kind or another are beneficial to health. It is even possible to adduce statistics which lend a certain superficial plausibility to such a conclusion. The fallacy is that the statistics are usually based solely on gross mortality experience. Actually, except in the presence of widespread and highly fatal epidemics, gross mortality rates are affected rather slowly even by sustained economic and biologic forces. It is only by the use of more sensitive indices, such as the mortality and morbidity rates for specific diseases, appraisals of the physical status of affected population groups, and data on the quantity and quality of medical care received by the people, that one can hope to determine the current effects of such conditions as we are likely to experience during the course of the war.

If the war to date has brought about some improvement in the general level of health in this country, it is not surprising. There are good reasons why an improvement should be noted. People have more money to spend for food and recreation and doctors' services, and this should naturally have a beneficial effect. The shortages I have mentioned have not yet been serious enough to cause actual hardship or serious deprivation on a large scale. The decline in automobile traffic and speed limits alone should decrease accident rates. The placing of a large part of our youth in military camps under careful medical supervision has also been a salutary influence. But we must remember that we are not yet knee-deep in the war. When I consider all of the factors and their significance for the future, I can see no reason for either optimism or complacency in health matters.

One reason for this is so obvious that I hesitate to mention it. Yet I believe it is not fully appreciated. It is simply this: If we believe that the present relatively high level of health has been attained in large measure through the operation of our health, sanitation and medical services, as well as through an improved standard of living, it is fair to assume that curtailment of these services and a decline in living standards will have a detrimental effect.

Already people have been forced to live under more crowded conditions than ever before. Obsolescent housing can no longer be replaced by modern structures. New houses, if supplied at all, must be of a temporary variety designed for emergency use. Workers are being accommodated to an increasing extent in dormitories or barracks rather than in single-family dwellings. Because of transportation difficulties, living quarters are being sought in crowded industrial centers rather than in healthful suburban areas. While the impending fuel shortage may not result in undue exposure, it will aggravate crowding as people restrict themselves to closer quarters in an effort to conserve heat. All of these circumstances will facilitate the transfer of infection.

This does not mean that we should credit the predictions of serious epidemics which now and then appear in newspapers and popular magazines. No unbiased examination of the underlying facts supports such predictions, at least as far as the immediate future is concerned. An epidemic of influenza such as the one of 1918 might occur, but it is impossible to predict it on the basis of present knowledge. It is safe to say, however, that if an outbreak of the virulent type of influenza should occur, there are objective circumstances which would favor its transmission.

There is no indication at present that our food supply will be reduced to a point where widespread and serious malnutrition will result. Nevertheless, we will be required to limit the intake of certain foods, especially the animal proteins. Canned goods of all kinds are rapidly being taken off the market, and many food products are scarce because of farm labor shortages. Absence of spices and flavoring extracts will render meals more monotonous. All of these factors make the provision of an abundant, well-rounded diet more difficult, and thereby tend to reduce both vigor and resistance to disease.

Resistance is also impaired by fatigue, an inevitable accompaniment of longer working hours and employment of less rugged and well trained workers. Although current statistical data do not show any significant trend in the general health of the industrial population at this time, there appear to be certain straws in the wind which merit attention. Among 838 families canvassed in Baltimore during September 1941, and again during September 1942, there was an increase of approximately 10 per cent in the number of persons who were at home with disabling illness on the day the visit of the canvasser was made. In certain industries, notably steel and chemicals, increases have been noted in the rates of illnesses lasting 8 or more consecutive days. Statistics relating to more than 21,000 identical manufacturing establishments show that in 1941 the frequency rate of disabling injuries was 14 per cent greater than in 1940, while the severity rate was 7 per cent greater.

It cannot be denied that we have already experienced some lowering of standards in food sanitation. Milk is now delivered every other day instead of daily, and new mechanical refrigeration is no longer obtainable. It is becoming increasingly difficult to secure repairs and replacement parts for such essential equipment as milk pasteurizers. The quality of food served in restaurants has been lowered due to the rapid turnover and consequent inexperience of food-handling personnel. To these combined influences may be attributed what appears to be a rise in the occurrence of acute intestinal disturbances. No doubt there will be further lowering of our sanitation standards.

With increased use of air transportation for international travel, the chance for introduction of yellow fever and malignant forms of malaria are, of course, heightened. Demand for speed and secrecy in both air and maritime traffic interfere seriously with proper quarantine measures. Adequate mosquito control at air and maritime ports should, however, serve to ward off danger. Plague infection among the wild rodents of the western states today has greater significance than ever before, because many of the once sparsely settled plague areas are now centers of military and war industry activity. But unless plague should assume pneumonic form the likelihood of a human epidemic is not great. There has been a considerable increase in the incidence of endemic typhus fever, as well as in the number and extent of the areas affected. At present, the domestic rat is the source of this form of typhus fever, and it is conveyed to human beings by means of the rat flea. All biologic tests so far devised, however, indicate that the organism which causes our form of typhus fever is not different basically from the typhus organism of the Old World. Fortunately, most of our people live under fairly sanitary conditions and are not infested with body lice; hence there is little opportunity for the transfer of infection from man to man. Nevertheless, it is conceivable that adverse conditions brought about by the war might result in our endemic typhus fever taking on the characteristics of the epidemics now occurring among depressed populations in other parts of the world. Although such a situation does not seem likely to arise in the near future, typhus fever constitutes a threat of unknown proportion.

Everything I have said thus far adds up to one conclusion: We shall have more work to do and fewer resources for doing it. In such a situation, especially when so much depends on the outcome, the only thing to do is to adjust methods of operation to changing conditions. The knowledge and skill of every physician who remains in civilian practice must be made available to the largest possible number of patients with the least expenditure of time, effort and critical materials consistent with a reasonably adequate standard of service. What such a standard shall be will depend on how critical the situation becomes, and it may be necessary to change the definition according to circumstances. At any rate, more patients must be seen by fewer doctors, and in many places this cannot be accomplished with the present method of individual home and office calls on a fee-for-service basis. The organization of a larger part of medical practice around hospitals and clinics is indicated, not only in order to reach patients who cannot pay, but also to permit the most effective utilization of physicians' time and skills.

Another factor which will tend to bring about group systems of practice is the shortage of medical supplies and equipment. No longer will every physician who chooses to do so be able to buy an X-ray unit, a diathermy machine, or even some of the more simple instruments in general use. I am sure that most of you in this audience know where there are X-ray units, basal metabolism and electrocardiograph machines, and diathermy apparatus that are in use only about 10 per cent of the time. Moreover, there is a great store of equipment standing idle in the offices of physicians who have gone into military service. It is possible that requisitioning of such equipment may be resorted to.

Except with regard to quinine, we have not yet heard much about a scarcity of drugs. But certainly the supplies now on the shelves of our innumerable pharmacies must contain frozen assets of considerable proportion. The extent to which pharmaceuticals or pharmacies should be consolidated is a controversial question which presents many difficult aspects. Physicians should have some suggestions to offer on this subject in advance of compulsory measures which may be dictated later as a result of more serious shortages than those experienced to date. Unquestionably, the number and variety of prescriptions could be substantially reduced. This particular field is one which lends itself better than most others to purely voluntary regulation. It might also be advisable to scrutinize the long list of self-administered proprietary remedies and nostrums to see where savings of vital materials or drugs could be effected.

A problem which has so far not been faced realistically is the redistribution of physicians according to people's needs rather than their economic resources. Studies recently completed by the U. S. Public Health Service covering a 15-year period prior to the present emergency show that in urban centers there has been a steady increase in the physician-population ratio out of all proportion to the increase in population. In 1923, the ratio of physicians to population ranged from 96 per 100,000 in the state of Mississippi to 151 per 100,000 in the state of New York. Fifteen years later, in 1938, the disparity between the ratios in these two states was even greater; by then Mississippi had been reduced to 70 physicians per 100,000 population, while New York had 193 per 100,000. If counties in the country as a whole are placed in two groups, namely, metropolitan and nonmetropolitan, we find that the 1923 ratios were 152 per 100,000 and 110 per 100,000, respectively. By 1938, however, the situation was worse, with only 92 physicians per 100,000 in nonmetropolitan counties but 164 per 100,000 in the metropolitan counties.

It was hoped that in selecting medical personnel for duty with the armed forces account could be taken of the unequal distribution of physicians in relation to population. A quota system was therefore adopted which provided for the recruitment of relatively high percentages of physicians from states having a high physician-population ratio and lower percentages from states having a low ratio. Unfortunately, this formula did not work as well in practice as it did on paper. The states which are most generously supplied with physicians have failed most appreciably in meeting their quotas, while the states with the lowest quotas have supplied the highest percentages of their medical manpower.

The failure of this system to accomplish its purpose cannot be attributed to those operating the Procurement and Assignment Service. Rather, this failure reflects the shortcomings of any system based upon voluntary action in the face of a national emergency. At present it would seem that there can be no effective redistribution of physicians, or even selective recruitment for military purposes, unless the power to effect these measures is vested in some governmental agency operating under a law which is fair in its provisions and impartial in its enforcement. Besides, if such steps are taken, compensation for services rendered must be equitably adjusted. It is obviously unfair to select arbitrarily one physician for service in the Army, where he risks his life, while another remains at home and reaps the pecuniary benefits associated with a scarcity of medical care and excess purchasing power. Furthermore, if a physician is taken away from a lucrative practice and placed in a community where financial opportunities are limited, he should be guaranteed an income of at least a reasonable amount.

It is recognized, of course, that the simple operation of the selective service system will not produce the number or kinds of physicians required by the armed services. I will not attempt to say how this should be done or how relocation of physicians for civilian duty should be accomplished. It seems evident, however, that special measures, different from any so far adopted, will have to be taken if the primary purposes of procurement and assignment are to be achieved.

I believe that our present manpower shortage can be relieved to some extent through utilization of subsidiary personnel for all tasks which do not actually require specialized training of a high degree. There is no question but that some of the functions now performed by physicians could be done by nurses, technicians and clerks. Similarly, many duties now discharged by graduate nurses could be performed equally well by auxiliary workers with less training.

This leads us to the possibility of establishing systems of rationing and priorities with regard to medical services. Rationing of such services, of course, presents extremely knotty and complicated problems. It is one thing to force people to do without gasoline or rubber heels, and quite another to ask that they put up with pain. It is relatively simple to issue a book of tickets allowing the purchase of limited quantities of sugar or shoes, but it is manifestly impracticable to restrict an individual to one X-ray diagnosis or one laparotomy within a specified period. Nevertheless, if the war continues a long time it will probably be necessary to impose certain limitations on service. The time to begin thinking about this is now.

There are certain refinements of therapy and service which might be foregone without detriment to the patient. As an example of one aspect of medical service in which some form of rationing seems essential, let me cite the field of nursing. The shortage of nurses is probably even more acute than that of physicians, and it is destined to become more serious. Yet, despite the shortage, private duty nursing service, especially in hospitals, has increased considerably since the business upswing.

The first and obvious step in alleviating this situation is for hospital administrators and physicians in charge of cases to agree upon the minimum amount of nursing care essential to the recovery, not the comfort, of the patient. Except for patients who are critically ill, this requirement can be met by ordinary floor service.

Any rationing scheme presupposes the distribution of goods or services on the basis of need rather than the economic status of the consumer. All authoritative studies on the occurrence of illness and the receipt of medical care show that under our scheme of organization care is received in direct proportion to the ability to pay. As the shortage of physicians grows more acute, it is only reasonable to assume that, under an unregulated system, ability to pay will become more than ever the deciding factor in whether or not the patient can command the physician's attention. This brings up the question of whether or not the physician should be permitted to choose the patients whom he will serve. We have heard a great deal in recent years in defense of the patient's freedom to choose his physician. In the future I venture to say we shall hear even more, but in a spirit of criticism, about the freedom of the doctor to choose his patient.

There is one further point I should like to make in regard to personnel. Even under the most rigid system of regimentation there would still be shortages. Consequently, there must be an acceleration of the training processes for all types of medical workers. Already steps have been taken to operate medical schools on a year-round basis. Hospitals can now obtain Federal grants to increase enrolment of student nurses and to assist needy students who would otherwise be barred from such education. I fear that we shall have to go even further than this by reducing the period of resident study in nurses' training schools.

Some of the suggestions I have presented here may be resisted, at least for a time, on the grounds that they will disturb the status quo, tear down standards which have been built up by great effort over a period of years, and substitute regimentation for free enterprise. It is impossible to deny that these effects are certain to follow in some degree any measures designed to make the most effective use of shrinking resources.

Nevertheless, the purpose to be accomplished, namely, winning the war, must be weighed against the trials and discomforts which an all-out effort entails. Most of those who are inclined to resist all-out measures would accept almost any rearrangement of our society and institutions if they were assured that the changes were necessary and that they would not remain in effect after the war. My answer to this point of view is that no one has, or can have, exact information as to what will be necessary to win the war. The stakes are so great, however, that we cannot afford to risk anything short of a supreme effort. No one can foretell the length of the war nor the duration of the period of reconstruction which will follow. Much less is he able to predict the kind of institutions which will be suited to our post-war needs. Perhaps some of the institutions established in order to win the war will be necessary to insure winning the peace.

PUBLIC HEALTH CONTROL OF VENEREAL DISEASES IN THE DISTRICT OF COLUMBIA*

R. A. VONDERLEHR, M.D.

Assistant Surgeon General, United States Public Health Service

VENEREAL diseases on the battle line or the production line are a menace to the success of the allied war effort. As such they can no more be tolerated than the Axis spy or the domestic traitor. Like the spy and the traitor they are undercover operators. They are easy to conceal, and fear and ignorance all too frequently cause their concealment. But in spite of this natural tendency toward concealment, we are better informed today as to the actual whereabouts and amount of venereal diseases in this country than we have ever been before, and we are better equipped to find and treat them.

Our information and our equipment, however, are absolutely useless until they are put to work. This afternoon I want to talk about putting them to work. I want to sketch briefly for you the venereal disease problem as it manifests itself in the country as a whole and specifically in the District of Columbia. Finally, I hope to make some suggestions for the further elimination of the venereal diseases, menaces to the success of the American war effort.

Careful observation over a long period of time has enabled the Public Health Service to prepare reliable estimates showing the prevalence of syphilis and gonorrhea in the United States. It has been estimated that about 2,000,000 persons are infected with gonorrhea each year. The great majority of these persons get some kind of treatment, either by private physicians, at clinics, from drug clerks, or from quacks. It is also estimated that there are currently about 3,200,000 syphilitic people in the country.

A surprisingly large number of the country's syphilitic people are young men between 21 and 35 years of age. This was dramatically demonstrated by the serologic examinations given to the selectees. On the basis of the first two million examined, we can now safely say that about 4.8 per cent of the men in the country between the ages of 21 and 35 have syphilis. Among the negroes in this group, the rate is 277 per thousand or nearly 28 per cent.

The rates in the states vary. Mississippi is highest with an average rate of 173.8 per thousand, and North Dakota is lowest with a rate of only 6.9 per thousand. Mississippi has more than 17 per cent; North Dakota has just over half of 1 per cent. The New England states have the lowest rates; the eastern South Central states have the highest. The most significant single factor in determining the various state rates seems to be race. The rate among the Florida negro selectees is 417.7 per thousand, almost 42 per cent.

Among the selectees examined in the District of Columbia through April 15, 1941, about 103 out of every 1,000 men between the ages of 21 and 35 had syphilis. Among the negroes this rate is 263; among the whites, 20. There are sound reasons for this comparatively high rate in the District of Columbia; and since everyone here today is professionally interested in the District and its people, I should like to examine the local rates rather carefully.

First of all, we must accept the fact that the District of Columbia is a boom town. During the thirties its population leaped from 487,000 to 663,000, a gain of roughly 36 per cent. During the last 2 years there has been another 20 per cent increase, bringing the population of the District very near to 800,000. It is one of the fastest growing cities in the United States and as such is subject to slightly more than its share of growing pains. Housing accommodations are scarce and expensive. Transportation facilities are inadequate. War work is being carried on at a furious pace in cramped and crowded quarters.

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* Presented at the Fourteenth Annual Scientific Assembly of the Society, September 29, 1942.

The selectee figures for the country have demonstrated conclusively that venereal disease rates are highest among the colored population. In addition, then, to the feverish activity and congestion of Washington, there is the matter of race. Over 28 per cent of the population of the District is colored, and this colored population has increased by about 72 per cent since the 1930 census. There are, therefore, in the District all the conditions which seem to favor high venereal disease rates: incredibly rapid population increase with the resulting social dislocations, inadequate living facilities, and a large and rapidly increasing colored population. We should not be surprised that the venereal disease rate is high.

The District, however, is not wholly unequipped to handle its venereal disease problem. In addition to the physicians in private practice, treatment facilities include 21 clinics, a staff of visiting nurses, and a number of lay workers engaged in follow-up work. There are at present 7 night clinics for those whose work makes impossible their visiting the clinic during the daytime.

It is estimated that there are about 45,000 cases of syphilis (early and late) in the District of Columbia. The present clinic load is about 6,000. If the private physicians are treating another 2,500 patients—and I think that is not unlikely—then we have almost one fifth of the entire syphilitic population of the District under treatment. The clinics have weeded out much of their late syphilis. I am told they now are treating about 44 per cent early syphilis as compared with 37 per cent for clinics in the country at large. I have no recent information on the amount of early syphilis private doctors are treating.

That, in rough outline, is the venereal disease picture in the District of Columbia. I might add that there are about 1,000 patients with gonorrhea currently in the clinics and a comparatively small number with chancroid, granuloma, and lymphopathia venereum. On the whole, I think these figures are not too bad for a boom town. But here in the District, as in hundreds of cities throughout the United States, we must look forward to difficult times as the war progresses. We must expect to be called upon to do more work with fewer workers. The District is still growing. I should not be surprised to see its population go over the million mark in the near future. At the same time we know that our supply of doctors, nurses, laboratory technicians, investigators, clerks and other workers will be depleted seriously by the war effort. What is to be done?

The emergency problem is, of course, to get infected selectees and their contacts in condition for military service and essential war work in the shortest time possible. In the District a plan has been developed for getting these persons under treatment. The system is working to a remarkable extent. Our information is incomplete, but we know that nearly 1,400 selectees were brought under treatment in the clinics between August 11, 1941 and June 30, 1942. Of these, 145 have been released to the Selective Service Board as fit for duty. We have no information as to the number of selectees who are being treated by private physicians.

This is a fair start as far as the clinics are concerned. But there can be no adequate control of venereal disease without participation of the practicing physicians. Local health departments cannot and should not attempt to do the job alone. This is especially true in such a city as Washington where wages are high and where a great many infected persons can afford to pay for treatment from private physicians.

Private physicians are treating more and more gonorrhea. This is as it should be. The treatment of gonorrhea with the new sulfonamide drugs is comparatively uninvolved; the treatment course is brief; and the patient need not as a rule interrupt his work during treatment. With syphilis, however, the story is different. Syphilis control is still complicated by the problems of case-holding over a comparatively long treatment course, and also by the problem of case-finding.

Case-holding is an art in itself. In most instances the patient takes a few treatments; the early lesions which caused him to seek treatment in the first place disappear; and then the patient disappears. Busy Washington doctors cannot follow up these patients and insist that they take treatment. But the District Health Department can. It has specially trained personnel for doing this job, and that personnel is constantly available to physicians in private practice. All the doctor is required to do is to notify the Health Department when his patient ceases to appear for treatment. An investigator will be sent out immediately to find that patient, discover why he stopped coming for treatment, and try to convince him of the necessity of returning to the physician for further treatment. All of this work is on a strictly confidential basis.

The District Health Department is also equipped to carry on an effective program of case-finding. In all cases, patients who can pay are urged to go to their doctors for treatment. Where it is obvious that the patient could not pay for treatment, he is sent to a clinic. The practicing physician can also contribute to case-finding. In his interview with patients he can point out the necessity of getting all contacts, both familial and extrafamilial, under treatment. In many cases he should be able to persuade his patient to assume that responsibility. It is patriotic and profitable for doctors to trace contacts and to treat them.

Venereal diseases are dangerous handicaps to the war effort. Their control is the problem of every man and woman in the country whose training has equipped him or her to practice the art of medicine. All jobs in America today are part of one big job, the job of winning the war. Let us consider, then, that in the business of venereal disease control, the private physicians and the District Health Department are partners, working toward a common goal within the framework of a single, integrated plan. The District of Columbia Health Department will teach the public the cause, prevention and treatment of venereal diseases. It will provide laboratories and drugs; it will keep known cases under treatment by private physicians or at clinics; it will seek out the sources of infection and bring them under treatment; and it will treat those who cannot afford to pay, and refer to practicing physicians all who can. The doctors, for their part, are asked to educate and treat their patients, to be constantly on the alert for contacts, and to report lapses from treatment as quickly as they are noticed. Such a combination working efficiently will control the venereal diseases even during the trying period of the war, not only in the District of Columbia but throughout the Nation.

The role of the general practitioner in the eradication of tuberculosis cannot be overemphasized. Mass programs of case-finding in high schools, colleges, industry and racial groups are public health functions. But there are other categories that such drag-nets do not reach. One of these is the older third of the population. They constitute no single group to be rounded up for mass examination. Yet, they contain a higher percentage of infectious cases than any other age. The family doctor alone has direct access to this reservoir of community infection. To drain it effectively and speedily his aid is indispensable. Editorial, Tuberculosis Abstracts, November 1942.

There can be no such thing as chronic pulmonary tuberculosis without a first infection. However, it is not usually the first infection that is important; what matters most is the subsequent superinfections and reinfections which should be guarded against in the infected group. David Zachs, M.D., Journal of School Health, June 1942.

WAR INJURIES OF THE HEAD*†

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WOUNDS about the head constitute the most serious and disabling injuries of warfare. This is not only true of the actual combat forces but also of the civilian population during air raids. The reasons for this is that the head is usually uppermost, is almost always inadequately protected, and is frequently struck by bullets, exploding shells and falling debris. Shepherd reports that injuries of the head constitute 14 per cent of all war casualties.

Since the war began a great deal has been written concerning the treatment of head injuries sustained in the field, aboard ship, and during air raids. Air raid casualties among civilian population make it just as imperative for every civilian physician to know the essentials of the early care of head injuries as the members of the medical corps of the Army and the Navy. During air raids it will be necessary for all physicians to render first aid treatment, select the cases in which immediate surgery is imperative, and decide which cases are beyond medical care. In no other group of injuries is this so important as in injuries to the central nervous system.

We are often asked if it is possible to classify war injuries of the head, both from the diagnostic and the therapeutic standpoint. This can be done only in a general way, since many factors are involved, such as associated injuries and the general condition of the patient. A patient may suffer a mild head injury and a chest injury, a severe burn, or a fracture of one or more extremities. The treatment should be directed toward the more severe of the multiple lesions, and a compromise in management may be necessary.

During and after the last war, neurologic surgery made many contributions to military surgery, the most important of which was a gratifying decrease of the mortality rate in head injuries brought about by such men as Cushing, Jefferson, Sargent, de Martel, Vincent and many others. From his experiences, Cushing outlined a classification of head injuries which Olivecrona had modified and estimated the mortality rate.

	Approximate Mortality, Per Cent
1. Wounds of the scalp	5
2. Cranial fracture without dural penetration	10
3. Cranial fracture with skull depression	20
4. Wounds (usually gutter type) with brain extrusion and indriven fragments of bone	30
5. Wounds usually of penetrating type with indriven fragments of bone and metal	40
6. Wounds of type 4 and 5 with penetration of bone or opening cerebral ventricles	50
7. Craniofacial wounds in which ethmoidal or petrosal sinuses are opened making primary closure impossible due to risk of secondary infection	60
8. Perforating or traversing wounds	70
9. Extensive bursting fractures	90+

The above classification was accepted with its mortality rate until the sunfonamides were found to be so effective in combating infection.

More recently we have been given a more simple classification by Cairns based upon his experiences with head injuries in Great Britain.

A. Closed head injuries: cases in which the scalp is unbroken.

B. Open head injuries: cases in which the scalp has been opened.

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* Presented at the Fourteenth Annual Scientific Assembly of the Society, October 1, 1942.

† The opinions or assertions contained herein are the private ones of the writer, and are not to be construed as official or as reflecting the views of the Navy Department or the Naval Service at large.

1. Scalp wounds without fracture of subjacent skull.
2. Compound fractures of the skull, fissured or depressed.
3. Penetrating wounds of the skull from projectiles.

I should like to use Cairns' classification in discussing the diagnosis and treatment of head injuries. The closed group of injuries includes any injury to the head in which there is no evidence of break in the skin. They range in severity from mild concussion to massive fractures with underlying damage to the brain. They differ from the open type of injury in that they are not complicated by infection except when rhinorrhea develops from a fracture through the cribriform plate or the fracture involves one or more of the sinuses. In this group are the cases in which surgery is rarely urgent and first aid treatment and observation are important because intradural and extradural hemorrhage may become evident.

In the diagnosis of this type of injury the state of consciousness as well as the pulse rate, blood pressure, and respirations are more important than the evidence of fracture. The unconscious patient may have suffered a mild concussion and the recovery may be immediate; or he may have sustained a severe damage to the brain and recovery be delayed. All unconscious patients should be cared for immediately and if their condition is not too serious they should be transported to first aid stations or hospitals for observation and treatment.

The term concussion has long been used in connection with the unconscious patient who has sustained a closed head injury. The exact cause of the loss of consciousness remains unknown but the causes to which it has been attributed are anoxia and edema of the brain, physical and chemical changes in the cells, and the physical effect of acceleration and deceleration of the head. Regardless of the cause a patient with true concussion will recover with conservative treatment consisting of supportive measures, rest, and adequate use of oxygen. Most of the patients who are unconscious as a result of a closed head injury are allowed to lie flat on their back until treatment is decided upon and may even be transported in the same position. The jaw is relaxed, the tongue is swallowed, and the patient breathes with difficulty and often becomes cyanotic. Not infrequently have I been called to see such a patient who is suspected of having Cheyne-Stokes respiration only to find that he is strangling on his swallowed tongue. These patients should be turned on their side, other injuries permitting, or even on their abdomen with one shoulder elevated and the head turned to one side. This insures easy breathing and the escape of saliva from the mouth. Most of the large emergency hospitals have instituted this position in all their emergency head injuries.

Restricted breathing in these cases contributes to the anoxemia of the cerebral cells. Prolonged anoxemia of the cells is followed by irreparable damage. It has been demonstrated experimentally by Schnedorf and his associates that brain concussion with or without skull fracture causes a depression of arterial blood oxygen from 5 per cent to 44 per cent below normal so that we have a definite potential oxygen deficiency of the cerebral cells in all head trauma. Thus the first consideration of the unconscious patient is unobstructed breathing, and the administration of oxygen by means of masks or intranasal catheters has been followed by clinical improvement. How much of the so-called post-traumatic syndrome can be attributed to the lack of oxygen and the resultant anoxemia of the cells remains to be demonstrated. But the clinical and experimental evidence strongly suggests that it is an important factor.

The diagnoses of concussion, contusion, and laceration of the brain in closed head injuries can only be made after observing the patient for some time. Patients suffering from concussion regain consciousness within a short time with a few residual symptoms. Those with contusion and laceration continue in a semicomatose state or even develop a state of restlessness or mania and require extreme sedation. Morphine should never be used in head injuries. Where there are associated injuries such as painful fractures or burns it may be necessary to compromise and administer morphine. Codeine and the barbiturates should be used, and in extreme restlessness paraldehyde can also be given.

The employment of spinal punctures may make possible a differential diagnosis. When the pressure of the cerebrospinal fluid is high and the fluid bloody, a more serious condition than concussion should be suspected. Roentgenograms may show fractures which when present indicate the extent of cerebral damage.

Consequently these patients with closed head injuries need careful observation, for immediate or delayed intracranial bleeding may develop to the point where operation is imperative, especially the bleeding from a severed middle meningeal artery. Fluids should be administered, preferably hypertonic dextrose either in 50 per cent solutions in quantities of 50 c.c. or in larger doses of 500 c.c. of the 20 per cent or the 10 per cent solutions. Magnesium sulfate enemas should be given, and should the unconsciousness last for several days an intranasal tube should be inserted and high caloric formulas be given. Sedatives can also be administered through the tube. Spinal punctures should be done when indicated.

In a discussion of open head injuries scalp wounds should be considered first. In civil practice the scalp wound is usually of small consequence, but, referring to scalp wounds in warfare, Cairns states, "The apparently trivial operation of cleaning and suturing a wound of the scalp is probably the most important neurosurgical operation of the war."

During a British symposium on casualties during air raids it was emphasized that there was nothing more dangerous than an innocent-looking, penetrating scalp wound. A physician attached to a first-aid station remarked that on a particular air-raid night he had treated a certain number of small innocent-looking wounds of the scalp. "Yes," replied the surgeon who had received the cases, "you sent me 11 in one night, 4 of them had foreign bodies in the brain and the other 7 were depressed fractures."

The emergency treatment of scalp lacerations consists of shaving the scalp, controlling the hemorrhage, cleaning the wound without a great deal of manipulation, introducing sulfanilamide powder, and bandaging with sterile dressings. These patients should then be transferred to a hospital or sick bay where facilities are available for extensive surgery if necessary.

Scalp wounds with fracture of the subjacent skull can frequently be diagnosed at the first-aid station. Here the extent of the injury can be appraised and the wound dressed by shaving the adjacent scalp, controlling the hemorrhage, cleansing the wound and instilling sulfanilamide powder and applying a sterile bandage. As with simple lacerations of the scalp the question of transportation of these cases and the decision of the importance of early operation rests with the physician, for with the use of the sulfonamides it has been found that closure of these wounds can be delayed in the less serious types of injuries for from 24 to 48 hours. This allows for a selection of cases for rapid transfer and alleviates the necessity for immediate débridement and closure in all cases.

It is sometimes difficult to differentiate between innocent-looking scalp wounds and the penetrating wounds of the skull. Cushing referred to the walking wounded, those patients who had received penetrating wounds of the skull from shell fragments and yet were not disabled. The experience of the British in the present war has emphasized the necessity of suspecting all cases of scalp wounds and getting roentgenograms of the head routinely whenever possible. These patients should be treated from the emergency standpoint in much the same manner as the foregoing patients, but when definite penetration is evident they should be transferred immediately for more extensive investigation and operation.

In carrying out débridement in extensive open head injuries all damaged brain tissue should be removed at the time of operation. This can be done sometimes without enlarging the opening of the skull. When small skull wounds have been produced by a shell fragment or bullet it may be necessary either to enlarge the opening with bone biting forceps or, as the French have suggested, to reflect a bone flap containing the defect. Authorities differ with regard to the type of opening to be made, and it is of relatively little importance depending on the nature of the wound and the judgment of the operating surgeon. Jefferson points out the advantages of the triradiate incision about the opening in the scalp and the débridement through this type of opening: "Its advantages are that an adequate exposure can always be obtained, the minimum of a gap occurs if the wound breaks down, and drainage tubes can be conveniently placed."

All operations upon the head should be preceded by a complete shaving of the scalp and should be done whenever possible under local anesthesia with infiltration of 1 per cent novocaine solution. Intratracheal gas or ether, or avertin by rectum may be used. Careful and complete asepsis should be maintained throughout the operation. Fragments of bone and shell should be removed as well as any particles of dirt and clothing. The damaged brain tissue should be carefully sucked from the wound. Mechanical suction if available is ideal, but a small catheter and a large bulb syringe can be used to great advantage. Bleeding vessels can be clipped with metal clips, ligated, or coagulated. When finished, the wound should be dry and no damaged brain tissue should remain. The wound should be covered with a thin film of sulfanilamide powder preferably blown into the wound by an atomizer. The dura should be closed with interrupted silk sutures whenever possible and the scalp approximated with 2 layers of silk, 1 in the pericranium and 1 in the skin. Sulfanilamide should be blown into the wound after the dural closure and before fixation of the bone fragments or bone flap.

Sulfanilamide has been found most suitable and efficacious for open wounds of the head. Sulfanilamide is the most soluble of all the sulfonamides, and there have been cases reported in the literature in which sulfathiazole and sulfadiazine powder used in brain wounds produced irritative symptoms evidenced by Jacksonian seizures. When these brains have subsequently been explored a small amount of unabsorbed powder in the form of a cake has been found producing the irritation.

Of all the sulfonamides for oral administration in wounds of the brain, sulfadiazine is the drug of choice at present because of its diffusion in the cerebrospinal fluid. In all open wounds of the head and especially when the ventricles have been penetrated it should be given over a period of 7 to 10 days. Also whenever there is a leakage of cerebrospinal fluid from the ears and nose in fractures of the skull sulfadiazine should be given.

The matter of spinal punctures has been mentioned in connection with closed head wounds. It has always remained a controversial subject, but recent experimental work has pointed strongly to the fact that lumbar punctures are of diagnostic and therapeutic value and can be done with safety.

Lundquist and LeRoy have reported some interesting experimental work in which they showed that within an hour after trauma sufficient to cause contusion to the brain of dogs, there was an average decrease of 24 per cent in cerebral oxygen consumption and of 17 per cent in cerebral blood flow. Twenty-four hours later there was little change in values if untreated.

The administration of 50 per cent glucose or sucrose to dogs with a 24-hour head injury was followed within an hour by a striking increase in brain oxygen consumption, but no significant change was noted in the cerebral blood flow.

Drainage of the cerebrospinal fluid in dogs with a 24-hour head injury was followed by an even greater increase in brain oxygen consumption and by a 25 per cent increase in intracranial blood flow.

From these experiments it can be inferred that the administration of hypertonic fluids and drainage of cerebrospinal fluid are valuable in the protection of the patient from anoxemia of the cerebral cells.

Cerebral edema and the dehydration regimen for this condition has not been discussed. It is apparent that such a condition does occur and that adequate treatment should be instituted. However, with the clinical and experimental evidence of an associated oxygen depreciation of the cerebral blood, the decreased oxygen consumption of the cerebral cells and the lessened blood flow, the necessity for drastic dehydration seems to be of relatively little value. It is of far more importance that all patients be treated individually, and if fluids have been lost through perspiration or loss of blood they should be supplied. The use of serum albumin for the treatment of shock has proved of extreme value in dehydrating the cerebral cells. That the administration of hypertonic dextrose or sucrose is of value has been demonstrated both clinically and experimentally. The restriction of fluids immediately after the head injury has been sustained has its clinical value, but we have learned a great deal about fluid balance and the necessity for such a physiologic stabilizing mechanism. Blood transfusions are frequently necessary as well as the administration of plasma in the treatment of these cases.

It seems superfluous to mention precaution against tetanus and gas bacillus infection; they must always be considered as an adjunct to the surgical treatment.

From the foregoing discussion of head injuries it can be seen that the emergency treatment depends upon the condition of the patient. When shock is present it should be treated. When no open wounds are found and the patient is unconscious he should be treated expectantly with proper posture for transportation, providing free breathing to prevent anoxemia and aspiration of saliva. When open wounds occur the scalp should be shaved, hemorrhage controlled, the wound cleaned, sulfanilamide inserted, and the wound covered with a sterile bandage. Cases should then be selected for rapid or delayed transportation according to the severity of the wound. No extensive surgery should be done until neurologic examination has been made, roentgenograms of the head have been taken, and facilities for extensive débridement and closure are available.

Only a general classification of head injuries can be followed, and treatment, both medical and surgical, depends upon the condition of the patient, the extent of the injury, and the available facilities.

Says the Kenny Method reduces disabilities from knee injuries. The disabilities resulting from such injuries as strains or fractures involving the internal structures of the knee joint can be greatly reduced by use of the Kenny treatment, developed by the Australian nurse, Miss Elizabeth Kenny, for infantile paralysis, VERNON L. HART, M.D., Major, M. C., U. S. Army, Camp Cooke, Calif., declares in *The Journal of the American Medical Association* for November 21, 1942. This is the first reported instance of the application of the Kenny method to any other condition.

"I have slected the various internal derangement injuries of the knee joint for consideration in this paper," Major Hart says, "however, any bone or joint injury could be presented to demonstrate the importance of the application of the Kenny principles. . . . Following an injury to a knee joint one can demonstrate muscle spasm, mental alienation of muscle and incöordination of muscle function. These are the three cardinal attributes in the stages of poliomyelitis which Miss Kenny recognizes and treats. . . .

"I have been impressed with the unusually high percentage of normal knees following this system of treatment and the extremely small number of patients with recurrence of disability. This program of treatment diminishes the original period of disability, eliminates the use of all plaster splints and other forms of mechanical appliances, reduces current disability and greatly reduces the necessity for surgical correction of knee joint disability as compared with other methods of treatment that I have used. . . ."

THE IMPORTANCE OF LABORATORY EXAMINATIONS IN THE ADMINISTRATION OF THE SULFONAMIDES*

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IF THE "miracle drugs" which are known as the sulfonamides are to be used intelligently, effectively and safely, certain criteria must be satisfied. First, an accurate bacteriologic diagnosis must be made; second, the drugs must be used in adequate dosage, and third, toxic reactions to the drugs must be recognized when they appear.

Many physicians do not feel that an accurate bacteriologic diagnosis is necessary before beginning therapy, and there may be exceptions to the general rule laid down. But each of the drugs has its own field of usefulness, since all are not equally effective in all infections. There also are certain infections which do not respond to any of the drugs of this group which are now in use, and valuable time may be lost before more appropriate therapy is begun.

The procedure to follow in identifying the infecting organism will depend upon the character and localization of the infection. A simple smear stained by Gram's method will usually suffice for identifying the gonococcus in a urethral discharge, or the meningococcus in cloudy spinal fluid. But in most instances bacteriologic culture will be necessary to positively identify the offending bacterium. In the case of urinary tract infections urine culture is necessary; in diarrheas, stool culture should be made; and in cases of puerperal sepsis or osteomyelitis, blood culture may be the best method of identifying the organism. It is important that all bacteriologic data be obtained before drug therapy is begun, because the cultural characteristics and the antigenic properties of the organism may be changed by the use of the drug.

Without going far into the matter of specificity of the different drugs for the various bacterial infections, it can be said that sulfanilamide is still the drug of choice for the treatment of infections due to the hemolytic streptococcus; for the gonococcus and the staphylococcus, sulfathiazole is generally preferred; for the bacterial dysenteries, sulfaguanidine or possibly succinylsulfathiazole is most effective; while for the pneumococcus and influenza bacillus, sulfadiazene is generally thought to be best.

In some instances a correct bacteriologic diagnosis may be established and the proper drug given, but the patient may show no improvement. Usually this means that the drug has not been given in adequate dosage. In some patients the drugs may be poorly absorbed from the intestinal tract, in others the drug may be converted into the acetylated form within the body and thus rendered less effective, and in other patients the drug may be eliminated too rapidly from the body. It is impossible to anticipate these factors in different cases, and in order to obtain good results it is necessary to know the concentration of the drug in the blood. Particularly is this true if the drug is given in a case of renal damage, with impaired excretion, when the drug may be retained in the body in large quantities and cause toxic reactions. With repeated determinations, one can increase or decrease the drug at will, so that an effective concentration is maintained. The "effective concentration" will vary somewhat with different drugs, different infections and different patients, but in general it can be said that high levels are necessary in the more severe infections.

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* Read before the Society, March 11, 1942.

The toxic manifestations following the use of the sulfonamide drugs are many and varied. Some are merely annoying to the patient, while others are potentially serious and may cause death if not recognized promptly.

Nausea and vomiting, dizziness, drug fever, and skin eruptions may appear within twenty-four hours after the drug is started. Such a prompt effect should always arouse suspicion that more serious manifestations will follow. This immediate reaction is usually noted in patients who have received one of the sulfonamide drugs previously.

Probably the most frequent serious reaction is acute hemolytic anemia. I have studied 5 cases dying of acute hemolytic anemia following the use of sulfanilamide, 1 following the use of sulfathiazole and 1 following the use of sulfadiazene. Sulfadiazene and sulfathiazole are generally thought to be less likely to cause acute hemolysis of the red cells than is sulfanilamide. This type of reaction is said to be more frequent in children than in adults, but I have never encountered a proved case in a child. Apparently as a result of individual susceptibility to the drug, the circulating red cells may rapidly disintegrate. I have seen the red cell count fall from 4,500,000 to 500,000 per cu. mm. of blood in 3 days' time. At the time of hemolysis the patient frequently complains of chilly sensations and dizziness, and the temperature may rise. If blood is drawn at this time and allowed to clot, it will be noted that the serum is dark and smoky due to the presence of hemoglobin outside the red cells. This circulating pigment is removed from the blood by the cells of the reticulo-endothelial system and is converted into bilirubin. The spleen may enlarge at this time and become palpable. Marked leukocytosis frequently occurs immediately following the hemolytic crisis, probably as a result of bone marrow stimulation since the reticulocytes are also increased. The bilirubin formed from the circulating pigment is passed back into the plasma, and as it circulates the tissues become jaundiced. Jaundice from hemolytic anemia may be evident within a few hours after the beginning of hemolysis. If the degree of hemolysis is great, there may be dull lumbar pain and the kidneys may be damaged by the passage of circulating hemoglobin through the glomerular filter and its concentration in the tubules. Here it may be precipitated as hemoglobin casts and may obstruct the outflow of urine, resulting in hemoglobinuria, oliguria, anuria and uremia. Most of the fatal cases of hemolytic anemia die in anuria and uremia, because the anemia can be successfully combated by transfusions.

These hemolytic crises are dramatic clinically and are comparable to the reactions which occur following the transfusion of incompatible blood. It is of the utmost importance that the hemolysis be recognized early and the drug stopped if anuria and uremia are to be prevented. Continuation of the drug for one or two more days may result in a fatal outcome.

If one bears in mind that this complication may supervene, it is not difficult to recognize it. A complete blood count taken on the third or fourth day after treatment is started should detect this abnormality. Urinalysis may show free hemoglobin, or the icterus index may be elevated. In severe cases, simple gross inspection of the urine will reveal the nature of the complication, since enough hemoglobin may be present in the urine to give it a smoky appearance.

The urinary complications which develop later during the course of sulfonamide therapy are usually not the result of acute hemolysis but are due to the formation of crystals in the urinary tubules. Sulfapyridine is the greatest offender in this regard, but sulfathiazole and sulfadiazene may also cause kidney damage. As a rule it is not the free form of the drug which crystallizes in the urinary tract but the more insoluble acetylated form. The demonstration of crystals of the drug in the urine is not sufficient cause to discontinue the drug, but it should suggest that kidney complications may occur. By increasing the water intake it is sometimes possible to dilute the urine sufficiently so that the crystals disappear. The crystals themselves may be irritating to the tissue cells with which they come in contact and may cause hematuria, or the crystals may serve as a nidus for the deposit of protein material so that calculi form. Such calculi may not be visualized in ordinary flat plates of the abdomen but they may cause lumbar pain and other symptoms. In a case in which crystals are forming in the urinary tract, it is well to chart the fluid intake and output so as to know immediately if any diminution in urine formation occurs. If the output of urine is rapidly decreasing, ureteral catheterization and lavage may restore normal function.

Another dangerous reaction to the sulfonamides is neutropenia or agranulocytosis. Fortunately this complication is quite rare, but when it does develop the outlook is poor. It is usually a delayed reaction, coming on after about two weeks of therapy. Milder degrees of leukopenia are not uncommon during sulfonamide therapy and call for careful study of the blood at frequent intervals if the drug is to be continued.

It is likely that the number of fatal reactions following the use of these drugs is much greater than most physicians realize. Frequently a fatality is incorrectly assigned to the disease for which the patient is being treated rather than to the drug employed. Only a definite realization that these drugs can be harmful will prevent needless deaths from their use. Whether or not there may be long delayed after-effects from the drugs, such as cirrhosis of the liver or chronic renal disease, remains to be proven by time.

In summary, it can be said that if the sulfonamide drugs are to be used intelligently, an accurate bacteriologic diagnosis must first be established. If they are to be used effectively, they must be given in adequate dosage, regulated by a knowledge of the concentration of the drug in the blood. If they are to be used safely, one must know the complications which may arise and must be on the lookout for them.

Industrial health and tuberculosis in industry are topics of great concern to all nations at war. Britain, the senior partner of the United Nations by length of service, was confronted much earlier than we were by problems arising from the conversion of peace economy to war production. The following are from recent British publications:

Information about tuberculous disease or previous treatment at a sanatorium or dispensary should be made compulsory for all persons entering industry. This is the practice at military boards and there appears no legitimate reason why this should not be incorporated into the civilian industrial life of the country. Such a measure would ensure the control of infection in the interests of the health of the community. Naturally, such a course will occasion opposition. It will be argued that this represents an encroachment on the freedom of the individual; however, freedom would be an intolerable institution if it permitted an individual indiscriminately to infect with disease his fellow creatures. BERTRAM MANN, Tubercle, March 1942.

Factors underlying the increasing incidence of tuberculosis are: the background of mental tension and anxiety due to the war which affects the population as a whole,—overwork, often associated with unaccustomed heavy work, with long hours—, usually with additional voluntary duties—resulting in marked fatigue, the increased exposure to infection from the large numbers absorbed in industry,—the overcrowding now prevailing, which must be regarded as an important factor in the spread of disease, especially when associated with "black-out" conditions and the lowered standard of nutrition associated with a restricted dietary. SIDNEY DEANER, Chief Tuberculosis Officer, Worcestershire County, England. Journal of the Royal Institute of Public Health and Hygiene, October 1942.

Tuberculosis is coming to be regarded more and more as a disease of economics. Editorial, Tubercle, March 21, 1942.

President's Page

WE WILL CARRY ON

The question has been raised as to whether our Annual Scientific Assembly should be continued during the emergency. The American Medical Association cancelled its meeting to be held in San Francisco next June. The 1942 meeting of the American College of Surgeons was called off, and similar action has been taken by other national and state organizations.

Leaders in medicine and prominent public officials having a direct or indirect interest in medical meetings have recently expressed themselves in favor of their continuance. The position taken is that regional and district meetings should be substituted for national gatherings because of wartime transportation difficulties. All are agreed it is extremely important that physicians be afforded the opportunity of keeping abreast of scientific progress.

Consideration was given by the Executive Board of the Medical Society of the District of Columbia, at its meeting on November 30, to the advisability of holding the 1943 Annual Scientific Assembly. It was the unanimous vote of the Board that despite difficulties which may be encountered, the Assembly should be held if space is available at the Mayflower Hotel, where arrangements are ideal. The Society has been advised that the Hotel will provide accommodations unless conditions at the time make it impossible.

Your President is certain that this announcement will be good news to members of the Society, many of whom attended the last Assembly. He is confident also that they will give Dr. Fred R. Sanderson, the President-elect, and the General Chairman of the Committee on Arrangements, who has not yet been chosen, the splendid coöperation given officers last year. The Assembly has become one of the outstanding scientific meetings in the country and deserves the enthusiastic support it has received in the past.

Editorials

AS DR. MOUNTIN SEES IT

In this issue of the Medical Annals there appears an unusual and thought-provoking address by Dr. Joseph W. Mountin, Assistant Surgeon General, States Relations Division, United States Public Health Service, on the "Health of the Civilian Population During War—The National Problem," which should be read by every physician who has the interest of his profession at heart.

There is no mincing of words in Dr. Mountin's analysis of the Nation's health and the steps which must be taken to preserve it. Some of his suggestions, he says, "may be resisted, at least for a time, on the grounds that they will disturb the status quo, tear down standards which have been built up by great effort over a period of years, and substitute regimentation for free enterprise." He frankly admits that "it is impossible to deny that these effects are certain to follow in some degree many measures designed to make the most effective use of shrinking resources."

Statements such as the following meet the eye throughout Dr. Mountin's paper:

"The knowledge and skill of every physician who remains in civilian practice must be made available to the largest possible number of patients with the least expenditure of time, effort, and critical materials consistent with a reasonably adequate standard of service."

"More patients must be seen by fewer doctors, and in many places this cannot be accomplished with the present method of individual home and office calls on a fee-for-service basis. The organization of a larger part of medical practice around hospitals and clinics is indicated, not only in order to reach patients who cannot pay, but also to permit the most effective utilization of physicians' time and skills."

A "factor which will tend to bring about group systems of practice is the shortage of medical supplies and equipment."

"A problem which has so far not been faced realistically is the redistribution of physicians according to peoples' needs rather than their economic resources."

Although many physicians will disagree with some of Dr. Mountin's conclusions, they will be impressed by his forthrightness. He does not equivocate but states his position in clear and unmistakable terms.

Whether one accepts or rejects his "predictions of things to come," indifference or resentment is not justified. Too much is at stake. The destiny of medicine in this country is still in the hands of the profession but a courageous and farsighted approach must be made to current issues involving medical practice if it is to remain there. There is no blinking the fact that changing conditions will make many adjustments inevitable. How they will affect the practice of medicine will, to a considerable extent, depend upon medical leadership.

Christmas 1942

May it bring hope and cheer to you and all peoples of a troubled world.

HAPHAZARD RECRUITING OF DOCTORS CHARGED

The Procurement and Assignment Service has come in for some pretty severe criticism in recent weeks. To those familiar with its operation this has not been unexpected. Hastily organized, the Service was handicapped by lack of time to prepare itself for a difficult task. For several months it had no permanent headquarters, its offices being moved at least three times. During this time the military services were clamoring for physicians to provide medical care for their rapidly expanding forces. To expedite enlistments, Medical Officer Recruiting Boards were organized by the Army to supplement the work of the Procurement and Assignment Service. This brought results; however, in its enthusiasm to do a good job, the Procurement and Assignment Service, it is now charged, did not properly safeguard the health needs of the civilian population. A number of states which could ill afford to spare physicians exceeded their quotas, established about the time intensive recruiting began.

Among those who feel that the Service has failed in its purpose is Senator Claude Pepper of Florida, Chairman of the Senate Education and Labor Subcommittee on Manpower. In a release to the press issued on October 29 the Subcommittee stated:

> "This report is submitted at this time because of the need of speedy action to prevent an immediate peril to the health of the nation.
>
> "Plain common sense persuades the Committee to report its present information regarding the haphazard recruiting of doctors for the Armed Services. This unplanned recruiting has led us to a dangerous health emergency.
>
> "The following facts are of paramount importance:
>
> 1. A disjointed procurement policy in the military services, under which voluntary and involuntary induction occurs with various military units competing for the very limited supply of doctors available for wartime America. This has resulted in hoarding and freezing unused doctors in the American armed forces in a ratio double that of the British.
> 2. Serious dislocation of medical manpower throughout the nation, because the ill supplied rural areas are contributing twice and sometimes four times the proportion of doctors coming from urban areas. This uneven procurement threatens doctor famines in vast rural areas with the probability of a general epidemic similar to the influenza conditions of 1918.
> 3. A tremendous unnecessary overmilitarization of the doctor supply at the expense of the civilian population. Possibly this has been based on an inaccurate estimate of the number of doctors needed for a thousand soldiers and because in early 1942 the authorities responsible for obtaining doctors thought they were immediately required to produce a medical organization for a 13,000,000-man army.
>
> "The conditions are so acute and dangerous that this preliminary report is made public with the recommendation that at the earliest possible moment the following steps should be taken: (a) the President, as Commander-in-Chief, should order a survey to be made of oversupply and undersupply of medical personnel for both the armed forces and civilian needs; (b) a reallocation should be made wherever it is determined an over- or undersupply exists; (c) instruction should be given to the War Manpower Commission to cease its procurement drive for doctors in all states where quotas have already been attained."

In elaborating upon the second point in its report the Subcommittee said:

> "It is the Committee's opinion that an over-all civilian authority should be established at once to supervise and control the drafting and recruiting of doctors. Until this authority is actively functioning no recruiting of doctors for the armed services should be permitted.
>
> "This authority should immediately conduct a census of all doctors, both those already serving in the armed forces and those still in civilian life. This census should be careful and detailed. It should include a study of the distribution of physicians in civilian communities so that we may know at once what are the minimum needs of each area for medical care and whether these needs are now fully met, oversupplied or undersupplied in both optimum and minimum terms. We should have firmly fixed in mind the irreducible minimum of medical care needed to prevent disease and epidemic in civilian America, including war plant areas."

Concurring in the position taken by Senator Pepper's Committee, the *Washington Post* on November 4 editorialized as follows:

> "It is an eloquent commentary upon the haphazard character of our program for utilizing manpower to best advantage that the recruiting of medical men should have been permitted to proceed without prearranged plans for estimating and providing for the minimum medical needs of the civilian population. For Washington it may not be too late to call a halt to indiscriminate recruiting of doctors for military service. But for many other less fortunate cities and communities shortages have already become alarming. . . ."
>
> "The immediate need is to set up a Nation-wide placement system to assure the most efficient utilization of the remaining physicians. That has not been achieved under the present method of administration which relies upon the medical profession itself to allocate medical manpower. Like most other activities under the general direction of the War Manpower Commission, a new approach seems to be called for. And it is needed in a hurry."

In an open letter to Mr. Paul V. McNutt, Chairman of the War Manpower Commission, a group of physicians, advocates of a Government system of medical care for the general population, complained:

> "Unfortunately . . . [the Procurement and Assignment] Service has failed of its purpose. It has neither procured nor assigned. The Army, in order to get the doctors it needed, had to step in and do its own recruiting, while war industry, with none of the Army's powers, has been left to fend for itself. Up to the present time, some 35,000 physicians have been obtained for the armed forces *by* the armed forces, while few if any have been assigned to industrial areas by the Procurement and Assignment Service.
>
> "Undoubtedly the Procurement and Assignment Service has had its difficulties, one being that it was never invested with any executive power. All that it could do was appeal. In a statement as long ago as September 22, 1942 it acknowledged that 'as now constituted . . . (it) is not in a position to deal with the financial and administrative problems involved in the provision of medical care' (i.e. allocation of civilian physicians)."

The letter goes on to express the opinion that the only national organization equipped to deal immediately with the emergency is the U. S. Public Health Service, and exhorts Chairman McNutt to "let the U. S. Public Health Service commission medical officers for civilian practice in selected areas. Let it send teams of doctors to care for the populations of these endangered communities. Let it be given the money appropriated under the Lanham Act to put up hospitals and clinics, let it be given the necessary priorities without more ado. Let it be given all these things, and let it be given them at once."

Answering some of the criticisms, Dr. Frank H. Lahey, Chairman of the Directing Board of the Procurement and Assignment Service, at a hearing held by Senator Pepper's Subcommittee, said: "I know the Procurement and Assignment Service has made lots of mistakes. I would not for anything have you think that we think it is perfect; it is far from it. After all, here has been a very urgent problem, done quickly, requiring a set-up and lots of things. But the one thing I would like to get before you clearly is that on the whole medicine has done pretty well; *it has met the demands.*"

Dr. Lahey agreed with Senator Pepper that the Service was a "doctor procurement agency for the armed forces." He said further that "everybody that looks at this sensibly knows that the basic error in terms of being able to accomplish what we would all like is compulsion."

In his testimony before Senator Pepper's Subcommittee, Dr. Morris Fishbein defended the Procurement and Assignment Service against the charge that it had failed because it had no authority to deal with both military and civilian needs. He said: "That is not true because the Procurement and Assignment Service, when established by the President, was definitely charged with considering just that distribution." He further declared: "I think the Procurement and Assignment Board has done a most competent and efficient job all the way through." Later he modified this statement somewhat: "I would say that it hasn't functioned 100 per cent. I know very few agencies that have. But I would say that it is functioning better all the time."

What finally happens to the Procurement and

Assignment Service will depend upon the President's disposition of the manpower situation. Regardless of his decision, changes must be effected in the Service if it is to fulfill its purpose. Overzealousness of state chairmen must be curbed. Red tape and administrative inefficiency must be reduced to a minimum. Civilian as well as military medical needs must receive thorough consideration.

The facts to date are that whatever the reason, the Service has "procured" but not "assigned." Under pressure by the Army it did an excellent job in stimulating enlistments. In its enthusiasm for the task, it failed to properly evaluate its responsibility to the civilian population. The contention that it had no authority is not valid because its recommendations with few exceptions have been accepted by the Selective Service System as well as by the Surgeon Generals of the Army and the Navy.

The District Procurement and Assignment Committee and its Chairman, Dr. F. X. McGovern, were considerably hampered for many weeks because of the lack of data on which to base minimum civilian medical needs. The Committee was concerned not only with obtaining physicians for the armed forces, which it did in coöperation with the Medical Officer Recruiting Board, but also in retaining medical men needed on the home front. It was upon its suggestion that the Procurement and Assignment Service requested the U. S. Public Health Service to make a survey of practicing physicians in Washington, a report of which appeared in the November issue of the MEDICAL ANNALS. It appears from this survey that Washington is nearly at the bottom of the barrel in so far as providing physicians for the armed forces is concerned. The District has furnished 100 per cent of its quota.

WAR AND MENTAL HEALTH

The mental health of the civilian population usually improves during wartime. The reasons are not far to seek. In the first place, the petty worries, anxieties and quarrels are submerged in the general stimulating necessity of saving our lives. In the second place, there is a chance for action as opposed to anticipation. There is a good bit of the cave man left in us. Danger rouses us, stimulates the sympathetic nervous system and the adrenals, so that feats of vigorous action are possible. If action is prevented by playing a waiting game, the pep dose of adrenalin is not used up and we get the shakes.

Adrenals give emergency supplies
Of energy to him who fights or flies.
This energy must quickly be discharged,
Suspense exhausts the man who fears, but lies.

Thirdly, there comes the burning passion of hate, energizing, purifying hate that burns away the mists of petty self-centeredness and causes the individual to band together with the stranger, or even his erstwhile enemy, for the common good. Without fear there can be no hate. Hate is the response of a person who has been startled from his complacency by some fearful experience.

During peacetime, we are individualists, almost as much as we please, but when war comes we realize the necessity for organization and discipline. When we participate in organization and discipline, the mentally fatiguing factor of choice is eliminated. There develops a feeling of belonging, of responsibility for others, of self-sacrifice.

During calamity, we have a feeling of the nearness of God. "God's will be done," is the unshakeable answer to catastrophe.

Finally, in wartime there is an outlet for our aggressive instincts. It is much more real than rooting for the home team or yelling: "Kill the umpire!" We have the chance of going into action. Suspense is past.

The fighter, win or lose, our wrath oft draws,
But anger unrelieved may be the cause
Of angina, insomnia or gas;
So fight, and break the other fellow's laws.

Peace? It's hard on the nerves.
Let's go!

WALTER E. FREEMAN, M.D.

PERTINENT PARAGRAPHS

November Meetings

The observance of Thanksgiving and the Annual Conference of Secretaries and Editors of Constituent Medical Associations held by the American Medical Association in Chicago on November 20 and 21 had their effect on activities of the Society, its boards and committees. Meetings were suspended for a week or more during the latter part of the month.

The following meetings were held during November:

November 2	Medical Bureau Committee
November 4	Business Meeting of Society
November 5	Section on Neurology and Psychiatry
November 9	Committee on Public Health
November 11	Scientific Meeting of Society
November 12	Committee on Industrial Medicine
November 17	Committee on Medical Economics
November 18	Scientific Meeting of Society
November 30	Executive Board

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Appearances Reach a New Low

According to the *Journal of the Louisiana State University School of Medicine*, students at that institution are not overly concerned about their appearance. It sems that the budding medicos insist upon remaining collegiate—not taking on the dignity that befits professional men. The *Journal* has this to say:

"It's the little things in life that count; clothes make the man; cleanliness is next to Godliness; confidence in the doctor is eighty per cent of the cure; all these are rather trite aphorisms which serve to introduce the subject of this editorial. The personal appearance of the student body has become more and more lax with the passing years, and through this past summer it reached a new low."

"In the past, it was the custom that every male student wear a coat and tie to school, and wear a clean gown while on the wards. As each freshman class came in, this precedent was set for them and they naturally followed it. With the present freshman class which entered this summer, no precedent was set, and now (though they are far from being the worst offenders) many continue to dress as they did on their respective college campuses. There the student is in a world of his own, free to dress as the current Esquire dictates. Here the student is constantly before the eyes of the public everywhere that he is seen and recognized as a medical student.

"May we make a plea that everyone voluntarily accept a little self-discipline toward his personal appearance, and regard it as much of his medical training as anatomy, pathology, and surgery. Let us not be like some schools which give actual grades on personal appearance, nor like this one formerly was—in which a coat and tie were made obligatory by the faculty. If each man will do his part we can soon accomplish an end in which medical students are a distinctive class, recognized by the neat personal appearance which should be characteristic of one of the most respected of professions and the oldest save one, rather than by their reputations as drunkards and don't-give-a-damns."

This is certainly laying it on the line. One would not dream it could happen in cosmopolitan New Orleans with its historical background of culture, romance and the grand manner. What is this generation coming to!

★

The Staff Room Strategist

Everyone is familar with President Roosevelt's opinion of "typewriter strategists." In a recent fireside chat he expressed his disdain for their knowledge of military affairs. The "strategists" themselves took the President's criticism in their stride and were apparently unruffled.

In the November 1942 issue of the *Nebraska State Medical Journal*, the physician counterpart of the "typewriter strategist" is described in these terms:

> "Always equipped with unusual information, the modest generalissimo, contrary to the new recognized principle of warfare through surprise blitz attack, greets his victim with leisurely pleasantry. When the proper rapport has been reached the strategist begins to pour out information, knowledge and wisdom. 'In Washington there is nothing but a political mess with dictatorship as the ultimate goal. Our boys in the armed forces are at the mercy of senile and incompetent brass hats, thanks to whom the war is already lost. The people are being fooled. It takes the Navy two months to announce the sinking of a ship. The Procurement and Assignment Service, for an illustration,—a complete failure. They even pulled out Seeley.'
>
> "If all victims of these harangues were conscious of the true nature of the 'strategist' there would be little justification for editorial comment. No one who values freedom would even for a moment interfere with a fellow's liberty to give vent to his views, whatever they be. Too often, however, the listener accepts these tales and comments as facts to be repeated at the next stop.
>
> "It is not within the province of this publication to enter into political or military discussions. However, rumor about the Procurement and Assignment Service cannot be accepted without challenge. The *Journal* considers it its duty to recall to the members of the medical profession that this Service was organized at the recommendation, not of politicians and brass hats, but of organized medicine. It is our baby. Let us not be intolerant of its behavior reactions in response to the complicated and unprecedented demands made upon it. Far from being a complete failure, it is working smoothly in the maze and confusion of a world in utter chaos. It is supplying medical personnel for our armed forces, and at the same time preventing a breakdown of medical services in the communities."

One can readily understand impatience with unreasonable criticism. There is considerable difference, however, between the rumor carrier and the intelligent individual who recognizes deficiencies which should be corrected. Undoubtedly, too many staff room strategists don't know what they are talking about, but unfortunately, there is an equal if not larger number who are silent because of indifference and lack of information. What medicine needs are real strategists, or more accurately, medical statesmen.

★

Believed It the Real Thing

Reactions of the public to the surgical demonstrations presented at the Community War Fair held in the Uline Arena last month gave the medical men participating the surprise of their lives. As one newspaper report stated, the demonstrations "rolled them in the aisles." This was literally true in a few instances. Some spectators were so intrigued by the demonstrations that they were oblivious to all that was going on around them. Not a few thought it was the real thing, among them the writer of the following letter addressed to the sponsors of the Fair.

> "This is an unusual request, but I would appreciate a reply.
>
> "Wednesday, October the 28th, the writer attended the War Fair at the Uline Arena.
>
> "Everything seemed to be honest and above board, but I have been told that the operation performed on the woman between three and four o'clock for appendicitis was faked, that she had on a Rubber Stomach, and that no real operation was performed. I find it impossible to believe this, because the doctors explained every detail so distinctively. Please use the self-addressed envelope and let me know if I am right, in my belief."

It was too bad to have to disillusion this man but truth compelled the sponsors to admit that it was not the real thing. Except in one instance when an over-enthusiastic surgeon wielded the scalpel a little too vigorously, nicking the real skin, the "patients" had a good time of it.

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Insurance Medicine

Most physicians think of life insurance examinations as being an unimportant part of medical practice. They regard them as a "side-line" of the general practitioner. However, an increasing number of competent physicians in general practice and the specialties have been appointed by insurance companies to represent them as medical examiners.

In an interesting article entitled "Examining for Life Insurance," appearing in the November number of the *Ohio State Medical Journal*, Dr. Howard Dittrick clarifies the role of physicians engaged in insurance medicine. He says:

> "If the importance of insurance medicine in medical practice were judged by discussion evoked in medical journals it would be inferred that this field played a distinctly minor role. A sounder evaluation of this relationship is shown in the following conservative estimates for 1936. These were furnished by the Association of Life Insurance Medical Directors of America and the Medical Section of the American Life Convention. During that year, of an estimated income for the entire American medical profession amounting to 850 million dollars, we note that fees from compensation insurance companies were 100 million dollars; fees from fraternal organizations, state insurers, self carriers, contract practice, group and industrial payments 30 million dollars; and fees paid to doctors by over two hundred old line insurance companies for medical examinations were over 70 million dollars, making a total of over 200 million dollars. In other words, about one fourth of the income of American physicians is derived from fees paid by various classes of insurance companies.
>
> "Perhaps the common impression that insurance income forms so small a proportion of physicians' earnings, is due to a former tendency to be secretive about insurance activities. Physicians were not particularly proud of such a connection and used it solely as a pot boiler. However, with more careful selection and with higher qualifications demanded by the larger companies, the professional status of the medical examiner has been steadily rising."

Dr. Dittrick concludes that in the field of life insurance, the physician will find an opportunity "which is challenging, diversified and remunerative. The very fact that the examiner retains an interest in private practice," he says, "increases his efficiency in the selection of risks. To a man who has a bent for the theoretical, preventive, or statistical side of medicine, insurance medicine beckons as a career. The examiner who receives an appointment in an active insurance company, who earns and maintains the confidence of his medical director, and who perchance enjoys the respect of the agency force, is indeed occupying an enviable niche in medical practice."

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Our Directory Growth

Lest those who turn to the 1942 American Medical Directory for information about physicians in the District of Columbia are misled, it should be explained that the phenomenal growth of the medical population shown therein is on paper only. The Directory discloses that there are 4,540 physicians in the District, of which 909 are members of the Medical Society of the District of Columbia. The 1940 edition of the Directory revealed that there were 2,243 physicians here, of which 883 were members of the Society.

Prior to the war, when few physicians from the District had entered the military services, there were approximately 1,200 physicians in private practice. The remainder of the 2,243 were employed by the Government on a full time basis or were on active duty with the regular Army and Navy. Of the 1,200, a considerable number were colored physicians.

An explanation of the 100 per cent increase in the total number of physicians—2,243 in 1940 to 4,540 in 1942—appears in the *Journal of the American Medical Association* for November 28. The *Journal* states:

> "For military reasons, medical officers of the regular U. S. Army and the U. S. Navy, on active duty, were listed in the new Seventeenth Edition of the American Medical Directory at Washington, D. C., with biographic data, titles, and local addresses as U. S. Army and U. S. Navy.
>
> "Officers of the Medical Reserve Corps, the Naval Reserve and the National Guard who are on extended active duty are listed at their home addresses followed by a symbol indicating their respective branch of service.
>
> "Reserve officers for whom home addresses could not be obtained are also listed at Washington, D. C., without local addresses.
>
> "Users of the American Medical Directory are requested not to send mail to officers listed at Washington, D. C., when only the address of the U. S. Army or the U. S. Navy is shown."

(Continued on page 497)

War Section

TRAINING OF NAVAL MEDICAL OFFICERS BROADENED*

Gerald G. Gross

Lieutenant (junior grade), United States Naval Reserve

The global character of World War II is interestingly reflected in the classrooms of the National Naval Medical Center. True, the relationship between a young medical officer peering through a microscope at Bethesda, Maryland, and a Marine potting Japs on Guadalcanal would seem to be remote; yet it is hardly an overstatement to say that the former's application of what he learns out in Bethesda may go a long way toward keeping that rifle warm.

To keep pace with the diversity of medical problems arising from dispersion of Navy and Marine personnel from Iceland to the New Hebrides and from North Africa to the West Indies, the Naval Medical School and Naval Dental School are intensifying their curricula for officers and hospital corpsmen. It is not enough for today's naval doctor to be able to recognize, treat and control such conventional annoyances as pneumonia, measles and gonorrhea. He must brush up on his pathology. It is his duty to master at least the principles of epidemiology. Diseases which, in all probability, the Reserve officer has never encountered clinically —dengue, leprosy, yaws and other tropicals—are now his business. He may be assigned to duty anywhere and he must be prepared for any eventuality.

Within the last few months courses in epidemiology and malariology have been launched at the Naval Medical School. Malaria, while endemic in greater or lesser degree all over the world, is being kept well under control in the Navy. This favorable showing, which is particularly noteworthy in view of the shortage of quinine, is not making for complacency. On the contrary, all phases of the problem are being emphasized more than ever, as attested by the new two-month course in malariology, students of which are hospital corpsmen as well as medical officers.

In mid-December a new group of recently commissioned medical officers, both Regulars and Reserves, is scheduled to receive basic indoctrinal training. These men and women—the Waves send their doctors to the National Naval Medical Center upon completion of their training at Smith College—will be introduced to such subjects as atmospheric hygiene, chemical warfare, tropical medicine, parasitology, preventive medicine and neuropsychiatry. Since they are officers as well as doctors, they will learn, too, about Navy regulations, customs and traditions, general orders and uniform regulations.

Concurrently classes are being conducted for hospital corpsmen, those versatile enlisted men who go everywhere the surgeons go and many places where surgeons can't be spared, to fit them as laboratory technicians, X-ray technicians, pharmacists and chemists. (No doubt you read last month of the pharmacist's mate who successfully removed a sailor's appendix aboard a submarine in the Pacific.)

Activity in the medical school is matched by that in the Naval Dental School, which has recently added a 30-hour first aid course to the indoctrinal program of newly commissioned officers. Here also hospital corpsmen are being trained as technicians, with practical instruction in oral hygiene, X-ray, record keeping and numerous other subjects. In peacetime this preparatory work took a matter of months. Now the time is counted in weeks; the need for their services at sea and in the field is that great.

In addition to the postgraduate and graduate instruction which is being given at the National Naval Medical Center, medical officers are being sent to Harvard and Columbia for advanced study in public health methods and to Johns Hopkins for training in venereal disease control, while small groups of dental officers are assigned periodically to the Mayo Foundation for postgraduate instruction in maxillofacial surgery.

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* Opinions and assertions expressed herein are the writer's and are not to be construed as official or reflecting the views of the Navy Department.

POLICIES GOVERNING APPOINTMENT OF MEDICAL OFFICERS

The Surgeon General of the Army has announced policies governing the initial appointment of physicians as medical officers. Necessary changes are given wide publicity, at his request, in order that the individual applicants, and all concerned in the procurement of medical officers, may know the status of such appointments.

The current military program provides for a definite number of position vacancies in the different grades. The number of such positions must necessarily determine the promotion of officers already on duty and, in addition, the appointment of new officers from civilian life. Such appointments are limited to qualified physicians required to fill the position vacancies for which no equally well qualified medical officers are available. Positions calling for an increase in grade will be filled by promotion of those already in the service, in so far as possible, and not by new appointments.

If this policy is not followed, it would definitely penalize a large number of well qualified lieutenants and captains already on duty by blocking their promotions which have been earned by hard work. In view of these facts, it has been deemed necessary to raise the standards of training and experience for appointment in grades above that of first lieutenant.

With this in view, the Surgeon General announced the following policy which has governed action taken on all applications since September 15, 1942:

Captain. 1. Eligible applicants between the ages of 37 and 45 will be considered for appointment in the grade of captain by reason of their age and general unclassified medical training and experience.

2. Below the age of 37 and above the age of 32, consideration for appointment in the grade of captain will be given to applicants who meet all of the following minimum requirements:

a. Graduation from an approved medical school.

b. Internship of not less than one year, preferably of the rotating type.

c. Special training consisting of 3 years' residency in a recognized specialty.

d. An additional period of not less than 2 years of study and/or practice limited to the specialty.

3. Eligible applicants who previously held commissions in the grade of captain in the Medical Corps (Regular Army, National Guard of the United States, or Officers Reserve Corps) may be considered for appointment in that grade provided they have not passed the age of 45 years.

Major. 1. Eligible applicants between the ages of 37 and 55 may be considered for appointment under the following conditions:

a. Graduation from an approved school.

b. Internship of not less than one year, preferably of the rotating type.

c. Special training consisting of 3 years' residency in a recognized specialty.

d. An additional period of not less than 7 years of study and/or practice limited to the specialty.

e. The existence of appropriate position vacancies.

f. Additional training of a special nature of value to the military service, in lieu of the above.

2. Applicants previously commissioned as majors in the Medical Corps (Regular Army, National Guard of the United States, or Officers Reserve Corps) whose training and experience qualify them for appropriate assignments may be considered for appointment in the grade of major provided they have not passed the age of 55.

Lieutenant Colonel and Colonel. In view of the small number of assignment vacancies for individuals of such grade, and the large number of Reserve Officers of these grades who are being called to duty, such appointments will be limited. Wherever possible, promotion of qualified officers on duty will be utilized to fill the position vacancies.

Much misunderstanding has arisen concerning recognition by specialty boards and membership in specialty groups. It will be noted that mention is not made of these in the preceding paragraphs. This is due to the variation in requirements of the different boards and organizations. Membership and recognition are definite factors in determining the professional background of the individual, but are not the deciding factors, as so many physicians have been led to believe.

The action of the Grading Board, established by the Surgeon General in his office, is final in tendering initial appointments. Proper consideration must be given such factors as age, position vacancies, the functions of command, and original assignments. All questionable initial grades are decided by this Board. Due to the lack of time, no reconsideration can be given.

There are in the age group 24–45 more than a sufficient number of eligible, qualified physicians to meet the Medical Department requirements. It is upon this age group that the Congress has imposed a definite obligation of military service through the medium of the Selective Service Act. Applicants beyond 45 years may be considered for appointment only if they possess special qualifications for assignment to positions appropriate to the grade of major or above.

CASUALTY INFORMATION SERVICE

There has been established as a part of the Executive Office, Civilian Defense, the Casualty Information Service. The Service is responsible for providing means whereby individuals may be readily located who, as a result of enemy action, may become casualties, homeless, or lost. One of the most important factors affecting civilian morale is the ability to procure accurate information concerning the status of friends or family.

The Casualty Information Service is divided into three main subdivisions: registration, central file, and inquiry divisions. Registrations will be obtained at hospitals, casualty stations, billet posts, civilian war aid shelters, and other appropriate points as subsequently designated. They will be taken by messengers to the central file where through a common over-all index, the information will be made available for prompt use.

Several inquiry division offices will be designated in different parts of the city and it is contemplated that public libraries will be included in this service. At these points individual inquiries may be made in person, and at a later hour responses to such inquiries will be delivered to those seeking information from these designated branches. This service will be prepared to handle in an expeditious manner inquiries originating outside of the Metropolitan Area.

PHYSICIANS' RESPONSE PRAISED

The Directing Board of the Procurement and Assignment Service announces that 95 per cent of the 1942 procurement objective of medical officers for the armed forces has been met. Toward this total a number of states have supplied more than their share of physicians and only a few states are lagging behind in their quotas. It is from these states that the additional physicians needed during the current year should come.

In a statement issued to the press, the Board expresses its appreciation of the response of physicians as follows:

"The recruitment of such a large number of physicians in a few months is a remarkable achievement and another demonstration of the traditional patriotism and unselfishness of the medical profession. In this achievement, and particularly in those of its members who are 'in service,' the profession can justifiably take pride.

"The end, of course, is not yet. Increases in the armed forces will necessitate more medical officers and additional demands will be made upon the profession for medical services in critical war production areas. The Directing Board is convinced, however, that the physicians of this country will respond to future calls for service, whatever they may be, in the same splendid manner with which they have already volunteered for service with the armed forces."

HOW INCOME AND VICTORY TAXES AFFECT THE MEDICAL PROFESSION

T. Delos Paxman
Wayne Kendrick & Company

The Revenue Act of 1942, recently enacted, increases income tax rates materially, bringing within the tax a great many individuals who have heretofore been exempt from income taxes.

As enacted in the 1942 Act, the exemption for a single person is reduced from $750 to $500, and for a married person or the head of a family from $1,500 to $1,200. Persons (except commissioned officers) in the military or naval service also receive additional credits for service pay of $250 if single and $300 if married or the head of a family. In other words, military and naval personnel below the grade of commissioned officer, receive the same exemptions as for the year 1941. The credit for dependents has also been reduced from $400 to $350 for each dependent.

The optional tax return may still be used by those whose gross income does not exceed $3,000. The simplified schedule originally provided in the 1941 Act is retained with changes in amounts of tax. This form may be used only if the gross income is from salary, wages, compensation for personal services, dividends, interest or annuities. A new phase in the law also limits the use of this form to persons on a cash receipts and disbursements basis. To those who have limited deductions, this form is advantageous, but it should not be taken for granted that the tax will be less if this form is used. A computation should first be made to determine the tax on the basis of the regular method.

The earned income credit is retained at 10 per cent of the earned income or 10 per cent of the net income, whichever is the lesser, not to exceed $1,400.

The rate of the normal tax has been increased from 4 per cent to 6 per cent, and surtaxes now begin at 13 per cent on the first $2,000 in excess of the personal exemption and credit for dependents. The rates increase very rapidly, so that after the amount subject to surtax reaches $22,000 the next $4,000 is subject to a surtax rate of 52 per cent. The maximum surtax rate is now 82 per cent on surtax incomes in excess of $200,000.

The new law includes deductions which heretofore have not been allowed. These include annual alimony payments, except amounts paid for support of dependents, and medical and health expenses which are in excess of 5 per cent of the taxpayer's net taxable income. It also permits a tenant-stockholder to deduct amounts paid to a coöperative apartment corporation to the extent that such amounts represent such taxpayer's share of real estate taxes and interest paid on indebtedness.

The capital gains and losses provision is still in effect, but the amount which may be deducted against normal income is limited to $1,000. In this connection such capital losses in excess of $1,000 may be carried forward for a period of five years, using $1,000 of such losses as a deduction each year.

The Victory Tax goes into effect on January 1, 1943, and all employers will be required to withhold from their employees 5 per cent of the salary paid which exceeds a weekly rate of $12.00. As an illustration, if a doctor pays his office nurse $35.00 per week, he first deducts the exemption of $12.00, leaving a balance of $23.00 which is taxable. From the latter he deducts 5 per cent, or $1.15 for the Victory Tax; he also deducts the Social Security tax of 1 per cent, which has been in effect heretofore, or 35 cents, paying the nurse $33.50. The doctor will then file a Victory Tax return (form to be supplied later) with the Treasury Department at the end of each three months' period showing the amount withheld for the Victory Tax and remitting a check therefor. At the end of the year a certificate showing the amount of Victory Tax withheld must be furnished the employee so that such employee may have it available in preparing his or her income and Victory Tax returns. There are certain credits of which the taxpayer may take advantage at the end of the year, not to exceed the postwar credit. Such credits, if advantage is taken thereof, are, however, in lieu of the postwar credit. The postwar credit provides that as soon as practicable after the war, a certain amount of the Victory Tax shall be credited against unpaid income taxes or refunded if no income tax is due. These credits, generally speaking, are, in the case of a single person, 25 per cent of the Victory Tax or $500, whichever is the lesser, and in the case of a married person or the head of a family, 40 per cent or $1,000, whichever is the lesser. In addition to the above amounts, there is also allowed an amount equal to 2 per cent of the Victory Tax or $100, whichever is the lesser, for each dependent of the taxpayer. An individual operating as a sole proprietorship or a partnership, for whom no withholding is made, will be required to compute and pay the Victory Tax at the end of the year.

All employers, including doctors, who employ nurses or other office help are required to file information returns on form 1099, if such salaries or wages paid exceed $500 to a single person or $1,200 to a married person or the head of a family. The information returns must be filed on or prior to February 15, 1943.

MEETINGS

Wednesday, January 13

The *Washington Heart Association* will sponsor the following program: "Rheumatic Fever—Recent Advances and Clinical Features," T. Duckett Jones, M.D., Research Director, House of the Good Samaritan, Boston, Mass.

Wednesday, January 20

The *Section on Otorhinolaryngology* will present the program. Speakers and subjects to be announced.

Wednesday, January 27

Noonday luncheon meeting at Medical Society's building. Program to be announced.

NEWS AND PERSONALS

The American College of Physicians has cancelled its 1943 Annual Session, which was scheduled to be held in Philadelphia, April 13–16, 1943. The Board of Regents by this action took cognizance of opinions expressed by the Secretary of War and the Office of Defense Transportation concerning large national medical gatherings. The College will, however, promote regional meetings over the country and will organize postgraduate seminars in various military hospitals for doctors in the armed forces.

Rear Admiral Ross T. McIntire was renominated Surgeon General of the Navy and Chief of the Bureau of Medicine and Surgery by President Roosevelt, November 9, to serve for another term of four years.

"Doctors at War: Book III of Doctors at Work" is the title of the new series of dramatized radio broadcasts which the **American Medical Association** is sponsoring in coöperation with the National Broadcasting Company. The series will be resumed Saturday, December 26, at 5 p.m., Eastern War Time.

The broadcasts will be a continuation of the story of Doctors at Work, carrying the fictitious but typical American physicians into the military and naval services of the United States and following the development of the practice of medicine in typical American communities affected by industrial expansion, troop training programs and other wartime influences. The program will be broadcast with the official approval and coöperation of the Medical Department, U. S. Army, and the Bureau of Medicine and Surgery, U. S. Navy.

The American Urological Association offers an annual award "not to exceed $500" for an essay (or essays) on the result of some specific clinical or laboratory research in urology, the amount of the prize to be based on the merits of the work presented. If the Committee on Scientific Research deems none of the offerings worthy, no award will be made. Competitors shall be limited to residents in urology in recognized hospitals and to urologists who have been in such specified practice for not more than five years. Essays must be in the hands of the Secretary, Dr. Thomas D. Moore, 899 Madison Avenue, Memphis, Tenn., on or before March 1, 1943.

The Fifth Annual Forum on Allergy will be held at Hotel Statler, Cleveland, Ohio, January 9 and 10, 1943. Copies of the program and registration blanks may be secured from Dr. Jonathan Forman, 956 Bryden Road, Columbus, Ohio.

Sections of the Society have been active this fall, holding monthly or bimonthly meetings.

Dr. Grace Langston, Chief of Child Protective Programs of W.P.A., gave a talk before the **Section on Pediatrics,** October 22, on "Services for Children in Wartime."

The Section on Neurology and Psychiatry has held three meetings, with programs as follows: October 8—"Cerebellar Atrophy: A Case Presentation," Dr. Max E. Johnson; November 5—"Encephalographic Studies in Multiple Sclerosis," Drs. Walter Freeman, Max E. Johnson, and Daniel Jaffe; December 3—"Continuing Muscular Contractions in a Case with Cerebral Atrophy," Dr. Alexander Simon, and "Institutional Therapy of Juvenile Offenders," Dr. Leonard M. Dub.

Dr. E. J. Stieglitz, Consultant at the National Institute of Health, addressed the **Section on Gastroenterology,** October 5, on the subject, "How Old Is 'Old'?" The Section invited members of the Medical Society to attend its meeting on December 7, which featured a showing of the film, "Peptic Ulcer," produced at the Lahey Clinic and shown through the courtesy of John Wyeth and Brother, Inc., Philadelphia.

The Clinico-Pathological Society met December 1 at the Kennedy-Warren Apartments with Dr. Edgar M. McPeak acting as host. Case reports were presented as follows: "Spinal Anesthesia," Dr. J. W. Lindsay; "Foreign Body in the Stomach," Dr. John H. Lyons; "Rupture of the Urinary Bladder," Dr. William B. Marbury.

The Washington Ophthalmological Society held its last meeting, November 23, in the Medical Society's building. Dr. Edmund B. Spaeth of Philadelphia spoke on "Surgery of the Lacrymal Apparatus" and also discussed war injuries. Case presentations were made by Drs. Sterling Bockoven, William Thornwall Davis, E. Leonard Goodman, John R. Lloyd and J. A. Sansoucy.

Major R. G. Spurling, M.C., U.S.A., Assistant Chief of Surgical Service, Walter Reed General Hospital, addressed the **George Washington University Medical Society,** November 21, on the subject, "A Practical Consideration of the Problem of Low Back Pain."

The Suburban Hospital Association, after its meeting November 30, announced that ground would be broken soon for Montgomery County's Suburban Hospital. Three medical staff appointments were made, namely, **Dr. Charles R. L. Halley,** Chief of the Division of Medicine, **Dr. Walter W. Boyd,** Chief of the Division of Obstetrics, and **Dr. Arch L. Riddick,** Chief of the Division of Surgery.

Drs. Charles B. Campbell and Richard T. Sullivan were reappointed by the Society, November 4, to serve as delegates to the Federation of Citizens' Associations during 1942–43.

Drs. J. Ross Veal and Roy G. Klepser received citations for their exhibit on treatment of frostbite at the meeting of the Southern Medical Association in Richmond, November 10–12. The study of frostbite cases was carried out at Gallinger Hospital, where they developed a special X-ray technic to show conditions of blood vessels when affected by frostbite.

Dr. Winfred Overholser was appointed Honorary President of the District of Columbia Occupational Therapy Association at its annual meeting, November 18. Dr. Overholser gave a talk on "The Place of Occupational Therapy in the Present Emergency."

Dr. Herbert P. Ramsey discussed hospitals and maternal welfare before the **Third Annual Postgraduate Seminar** for physicians of the District of Columbia, Maryland and Virginia, which was held at Howard University and Freedmen's Hospital, November 16–18. Approximately 130 physicians registered for the seminar, which was sponsored by the District and adjoining state tuberculosis associations, the Medico-Chirurgical Society, the District Social Hygiene Society and Howard University School of Medicine.

Dr. Wallace M. Yater and Theodore Wiprud attended the Annual Conference of Secretaries and Editors of Constituent State Medical Associations at the National Headquarters of the American Medical Association in Chicago, November 20 and 21.

E. R. Squibb and Sons was awarded the coveted Army-Navy "E" Pennant, September 18. The presentation was made by Rear Admiral Harold W. Smith, Medical Corps, U. S. Navy, Chief of the Navy's Research Division of the Bureau of Medicine and Surgery, who stated the award signified "excellence in performance, excellence in the manner in which you have met all date-lines on delivery, and excellence in the products that you have delivered to us." The Pennant was accepted by Carleton H. Palmer, Chairman of the Squibb Board of Directors. E. R. Squibb and Sons is to be congratulated on the excellent service they are rendering in the manufacture of critical drugs, biologicals, and other medical essentials for the armed forces.

BOOK REVIEW

The Care of the Aged (Geriatrics), 4th ed. MALFORD W. THEWLIS, M.D., Attending Specialist, General Medicine, U. S. Public Health Hospitals, New York City; Attending Physician, South County Hospital, Wakefield, Rhode Island; Special Consultant, Rhode Island Department of Public Health. Pp. 589. Price, cloth, $7.00. St. Louis: Mosby, 1942.

This fourth edition of a book which was first published in 1919 follows the general plan of the third edition. It is divided into five sections, titled as follows: General Considerations; Miscellaneous Geriatric Problems; Infectious Diseases; Allergy, Alcoholism, and Focal Infection; and Pathologic Conditions in Old Age. The first section is largely devoted to the discussion of questions which emphasize the importance of geriatrics. This section contains much sound common sense, particularly in the chapters on hygiene, work for the aged, and hobbies. This is the only section in which the author presents important material which supports his contention that geriatrics is becoming a specialty.

The second section deals briefly but completely with the anatomy and physiology of old age and then goes on to chapters on diagnostic errors, nutrition, rest and exercise, malingering, therapeutics and nursing. In the chapters on rest and exercise, therapeutics and nursing the author displays his keen understanding of the difficulties which beset the geriatrician. Many of his suggestions are quite original but so simple and logical that the reader wonders why they have not been expounded before.

The last three sections constitute the major part of the book and have titles which readily explain their contents. It is in these sections that the reader is most likely to be occasionally disappointed. For the most part, the diseases are discussed in much the same way that they would be found discussed in any brief textbook of medicine. It is true that the author speaks frequently in terms of the aged, but these terms are very little different from the ones that might be used for younger patients. Interspersed throughout are reports of cases drawn from the author's obviously great personal experience. These brief case histories are often helpful in the exposition of the material; occasionally they make one wonder if the diagnostic appraisal has been complete enough. The chapter on the cardiovascular system is given a deservedly prominent position in the text. Unfortunately, it partly fails to be convincing because of the method of presentation and because some of the therapeutic considerations are not explicit and some are not in agreement with modern concepts.

The author's style of writing is easy to read and his text has been well prepared and well printed. The illustrations and tables are helpful, but the numerous references at the end of each chapter seem superfluous in a book of this kind. The index seems to be quite complete.

H. H. H.

REPRINTS RECEIVED

The following reprints have recently been received for which due acknowledgment is made:

"Sickness as an Insurable Hazard." Mac F. Cahal. Minnesota Medicine, August 1942.

"The Private Physician's Role in the New York City Syphilis Control Activities." Charles Walter Clarke and Theodore Rosenthal. Journal of the American Medical Association, December 17, 1938.

"Massive Arsenotherapy in Early Syphilis by the Continuous Intravenous Drip Method." Conference called by the Commissioner of Health of the City of New York at the Mount Sinai Hospital, New York, on April 12, 1940. Archives of Dermatology and Syphilology, August 1940.

"The Value of the Radical Operation in Cancer of the Prostate." Correspondence Department, Journal of the American Medical Association, April 25 and June 20, 1942.

"Continuous or Fractional Spinal." James F. Davidson. Southern Medical Journal, April 1942.

"Carcinoma of the Lung of Long Duration." Alfred Goldman. Medico-Surgical Tributes to Harold Brunn, University of California Press, 1942.

"Tuberculous Cavities. Observations on Transpleural Decompression." Alfred Goldman, Harold Brunn, and Lauren Ackerman. American Review of Tuberculosis, February 1941.

"Massive Dose Arsenotherapy of Early Syphilis by Intravenous Drip Method. Recapitulation of the Data (1933 to 1941)." William Leifer, Louis Chargin, and Harold Thomas Hyman. Journal of the American Medical Association, October 4, 1941.

"Surgery of the Chest in War." Ambrose L. Lockwood. Journal of Thoracic Surgery, August 1942.

"An Investigation of the Effects of Sodium Bromide by Psychological Methods." Merrill Moore, Lowell S. Trowbridge, and M. Geneva Gray. Journal of Psychology, 1942, **14**, 59.

"Multiple Skin Cancer: A Statistical and Pathologic Study." Charles Phillips. Southern Medical Journal, June 1942.

"Recent Investigations on Gonococcic Vaginitis." John L. Rice, Alfred Cohn, Arthur Steer, and Eleanor L. Adler. Journal of the American Medical Association, November 22, 1941.

"The Relationship of the Medical Profession to Public Health in War." A. C. Scott. Texas State Journal of Medicine, July 1942.

"Positional Nystagmus in Cerebellar Lesions." E. A. Spiegel and N. P. Scala. Journal of Neurophysiology, 1942, **5**, 247.

"In Commemoration of the One Hundredth Anniversary of the First Application of Ether Anesthesia. Crawford W. Long: The Pioneer in Ether Anesthesia." Hugh H. Young. Bulletin of the History of Medicine, July 1942.

JAMES AUGUSTINE CAHILL, M.D., F.A.C.S.
(1892-1942)

One of Washington's most prominent surgeons, Dr. James Augustine Cahill, Jr., died at his home, 1900 Foxhall Road, on October 19, 1942. A native Washingtonian, he was born on October 26, 1892, the son of James A. and Mary Victory Cahill. He attended Western High School, Georgetown University and Georgetown University School of Medicine, graduating from the last named in 1915. Shortly after graduation he enlisted in the Medical Corps of the United States Army and served overseas for two years with the American Expeditionary Force. At the end of the war he was a Captain.

Ever since his return from the war he participated in the teaching activities of the Georgetown University School of Medicine, and after the retirement of Dr. George Tully Vaughan in 1933 he was appointed the Professor of Surgery and Director of the Department of Surgery. He inaugurated the system of surgical fellowships in the Medical School, and coöperated in progressive changes in the Medical School curriculum. He held the positions of Chief Surgeon at the Georgetown University and Providence Hospitals, and was Consulting Surgeon at Columbia and Gallinger Municipal Hospitals. He was very popular among physicians and medical students. The latter considered him almost in the light of a foster father.

Dr. Cahill was an active member of many medical societies and organizations, and was a Fellow of the American College of Surgeons. He was a Founder Member of the American Board of Surgery. Besides being a member of the Medical Society of the District of Columbia since 1920 and a Fellow of the American Medical Association, he belonged to the Tri-State Medical Society, the Hippocrates-Galen Society, the Southern Medical Association, and the Phi Chi Medical Fraternity.

Dr. Cahill will be greatly missed and long remembered. He was a very active member of the Medical Society.

WADE HAMPTON ATKINSON, M.D.
1866–1942

Dr. Wade Hampton Atkinson, a Life Member of the Medical Society of the District of Columbia, died November 14, 1942, at his home in Goldsboro, North Carolina, where he had lived since retiring from active practice in the District. He had formerly maintained his residence and office at 1402 M Street, N.W.

Dr. Atkinson was born near Princeton, North Carolina, in 1866, just after the close of the Civil War. Upon graduating from the University of North Carolina he attended the College of Physicians and Surgeons, Chicago. He received his degree in medicine from Georgetown University in 1889. He was licensed to practice in the District of Columbia the same year. In 1891 he became resident physician at Emergency Hospital and the following year began private practice in the District. He practiced here until his retirement, almost fifty years.

Dr. Atkinson became an Active Member of the Medical Society of the District of Columbia in 1892 and was made a Life Member in 1933. He was a Fellow of the American Medical Association.

(*Continued from page 489*)

Those who prepared the current Directory did so under great handicaps. It is not surprising that there are still many inaccuracies because of frequent changes in the status of physicians during these times. In the face of these difficulties, a very satisfactory job has been done.

MEDICAL SOCIETIES WITH LIMITED MEMBERSHIP

WASHINGTON, D. C.

1942–1943

SOCIETY	PRESIDENT	SECRETARY	NO. MEETINGS PER YEAR	DATE OF MEETINGS	PLACE OF MEETINGS
Aesculapian	Meetings temporarily suspended				
Association of Medical Fellows of Georgetown University	Meetings temporarily suspended				
Baltimore-Washington Dermatological	H. H. Hopkins, Baltimore	Reuben Goodman, Washington	8	3rd Thursday	Alternating Baltimore and Washington
Clinical Club	L. B. Norris	Sterling Bockoven	8	On call	Cosmos Club
Clinico-Pathological	E. B. Broocks	H. L. Darner	8	1st Tuesday	
George Washington University	W. E. Clark	O. B. Hunter	8	3rd Saturday	G. W. U. Schl. of Med.
Georgetown Clinical	A. J. B. Connolly	R. C. Kirchner	8	3rd Tuesday	Hamilton Hotel
Georgetown University Medical Alumni Club	W. J. Stanton	T. F. Keliher	2	On call	Georgetown Med. School
Hippocrates-Galen	W. L. Dunn	W. R. Morris	4	1st Thursday[*]	
International Medical Club	P. S. Constantinople	F. A. J. Geier	—	On call	Mayflower Hotel
Jacobi	L. S. Gordon	S. E. Lachman	8	4th Monday	
Kober	O. H. Wendt	Claude Moore	4	3rd Monday[†]	Columbia Country Club
Mackall	J. B. Marbury	C. S. Coakley	4	3rd Thursday[‡]	
Medical Arts	Claude Moore	J. K. Cromer	8	2nd Thursday	Kennedy-Warren
Osler	B. W. Leonard	C. D. Briggs	8	3rd Monday	
Pan American (D. C. Branch)	C. L. Hall	L. B. Norris	4	Sunday	
Saint Elizabeths Hospital	M. B. Pettit	A. K. Baur	3	On call	St. Elizabeths Hospital
Syphilis Journal Club	G. W. Creswell	L. M. Bischoff	5	Last Friday[§]	
Virginia, Maryland and District of Columbia	L. M. Mason	A. M. MacDonald	2	3rd Wednesday, May & Dec.	Alternating Va., Md. & D. C.
Washington Academy of Medicine	J. F. Siler	E. C. Albritton	3	On call	Cosmos Club
Washington Academy of Surgery	F. C. Fishback	J. W. Watts	4	2nd Friday[‡]	
Washington-Baltimore Psychoanalytic	D. M. Bullard	W. G. Whitman	4	2nd Saturday[‡]	Medical Society Bldg., Wash.
Washington Gynecological	J. W. Warner	L. L. Cockerille	5	4th Saturday[‖]	
Washington Heart	B. W. Leonard	B. J. Walsh	4	On call	
Washington Institute of Internal Medicine	Meetings temporarily suspended				
Washington Medical and Surgical	Norvell Belt	H. F. Dowling	7	4th Monday	Kennedy-Warren
Washington Ophthalmological	L. C. Moss	H. R. Downey	4	1st Monday[‖]	Medical Society Building
Washington Society of Pathologists	A. A. Nelson	Alfred Golden	7	On call	Army Medical Museum
Washington Urological	W. G. Young	Norvell Belt	4	Monday—every 6 weeks	Hay-Adams House
Women's Medical	H. G. Kain	Caroline Jackson	4	1st Tuesday[¶]	Doctors Hospital

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[*] November, February, March, April.

[†] October, January, March, May.

[‡] October, December, February, April.

[§] September, November, January, May.

[‖] October, November, January, March, May.

[¶] October, November, February, April.

Note: Most of these societies begin their regular meetings in October and continue through May.

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